TEZĂ DE ABILITARE

HABILITATION THESIS

RESEARCH AND CONTRIBUTIONS IN THE FIELD OF MEDICAL-LEGAL PSYCHIATRY, TRAUMATOLOGY AND TANATOLOGY

DOMENIUL / FIELD: MEDICINĂ / MEDICINE

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Oradea
2017
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THESIS SUMMARY

This Assignment Thesis entitled "Research and contribution in the field of forensic psychiatry, traumatology and thanatology" was carried out after thirteen years of my doctoral thesis and obtaining the title of doctor. It presents in a documented way the results of my research activity, the professional, scientific and academic contributions obtained during the period 2005-2017, a period of time in which I have pursued university activity within the Legal Medicine Discipline of the Faculty of Medicine and Pharmacy Oradea, but also a professional activity as a medical practitioner within the Bihor - Oradea County Medical Service. The scientific and research results obtained during this time have been materialized by publishing / presenting over 200 scientific papers at various conferences, congresses and ISI / BDI specialty journals and participation in three research projects. The professional results of my advancement, initially as chief medical officer of the Clinical Laboratory of Legal Medicine within the County Bihor - Oradea County Medical Service, and later in 2017 as Chief Medical Officer of the Bihor - Oradea County Legal Service, and the academic results by passing my position as an associate-professor at the Department of Forensic Medicine of the Faculty of Medicine and Pharmacy Oradea.

I have structured assignment thesis in three main sections:

SECTION A describes the outcome of my scientific and research work in the postdoctoral field, in the field of legal medicine. My professional multidisciplinary training in legal medicine and law has allowed me a complex approach of the studied fields. The research areas addressed are:

AI. Research and contributions in the field of forensic psychiatry - Through this research I have proposed to deepen every stage of forensic expertise from the ethical and legal aspects of the patient's consent at the expertise, to the difficulty of establishing the psychiatric diagnosis to the role of the forensic physician in the committee of psychiatric expertise on establishing the degree of social danger of the patient and the recommended medical safety measures. In this studies I have put emphasis on the forensic activity on "medical documents", that is to say on the "case file" to already deceased persons taking into account the frequency of growth of these expertise, in the context of the emancipation of the people, thus protecting their heritage more and more. I extended my research on the psychiatric and forensic aspects of the patients admitted to the Penal Code 110, given that for more than 10 years I participated in the psychiatric forensic examination commission for the periodic re-evaluation of the patients admitted to the Psychiatric Hospital for Measures of Secure Medical Safety, one of five such hospitals in Romania. In order to deepen research in this field, I actively participated in the Sectoral Operational Program Human Resources Development "European Standards for Competitive Postdoctoral Training in Advanced Research Management and Forensic Psychiatric Expertise" MLI Timișoara. Last but not least I focused my research on the addictions in forensic psychiatry, especially on alcoholism.

AII. Research and contributions in the field of forensic traumatology - The first approach continues with the analysis of the forensic traumatology aspects. In this sub-chapter I presented only part of my postdoctoral studies, but I had concerns for traumatology from the beginning of my career as a forensic physician. I have spent two years as a resident in the field of emergency medicine and taking advantage of the professional accumulations at that time, my doctoral thesis also focused on traumatology issues. As in legal medicine the traumatology problems are unexpected, I have continued my scientific work on this subject starting from everyday cases.
Traumatologic aspects of intra-family violence has been a priority area of scientific research. I had participated in numerous TV shows, in the press and at various conferences and symposia focused on domestic violence.

In order to deepen the research on this issue, I carried out in Bucharest in 2015 a national training on human trafficking entitled "Improving medical services for victims of human trafficking".

The articles were adapted to the dynamics of the events that resulted in the victims of all kind of violence and the traumas acquired under different circumstances. Thus, some of the articles relate to road accidents.

A constant concern was also to identify and prove the factors that favour domestic violence and other forms of violence. In this regard I was concerned about the interference between alcohol consumption, intra-family violence or road traffic accidents, as well as between psychic disorders, namely diagnosed or rather undiagnosed psychiatric disorders and different forms of violence.

AIII. Researches and contributions in the field of forensic thanatology - In the direction of this desiderate, having done over 1200 autopsies throughout my career, I have been preoccupied with the foundation of pathogenetic and morphopathological bases for all thanatogenerating mechanisms. I have tried to logically and arguably explain the mechanism of producing thanatogenerating lesions, but also the influence of environmental factors in determining the moment of death. By selecting the most difficult but also spectacular cases of this kind I have published many scientific papers. Based on the experimental data contained in my doctoral thesis (competitive factors in the thanatogenerating mechanisms), I could doubtless prove the cause of death in controversial cases. Moreover, by rigorous anatomo-topographic analysis of bone traumatic injuries, I have reached conclusions subsequently validated in court, other than those specified in the initial forensic documents.

I have also been concerned with establishing the thanatogenerating mechanism in the sudden and suspicious deaths considered the most difficult to manage in forensic practice, and the cause of death in these cases is often difficult to state.

AIV. Researches and contributions in other fields related to forensic activity - This subchapter presents the researches carried out in other directions that I have dealt with in detail, namely research in the field of legislation, malpractice and medical deontology; in the field of medical and forensic medical investigations.

SECTION B details my professional, scientific and academic contributions from the beginning of my academic career to the present. I have included in this section details about my professional development, my education and academic career, and all aspects of my national and international recognition.

At the end, I present the research / development plan of my professional, scientific and academic career. So, in my professional career, getting my PhD supervisor will allow me to engage and actively participate in the consolidation of the medical field at national and international level. The research directions developed so far will be continued, deepened and exploited, and the new directions addressed will be related to the current ones. At the same time, the scientific approach to quality management of education and research in the field of health will be part of my future preoccupations.

SECTION C contains the bibliographic references associated with the first two sections, the list of publications and the curriculum vitae.
REZUMATUL TEZEI

Această Teză de Abilitare intitulată "Cercetări și contribuții în domeniul psihiatriei medico-legale, traumatologiei și tanatologiei" a fost realizată după treisprezece ani de la susținerea tezei de doctorat și obținerea titlului de doctor. Ea prezintă, în mod documentat, rezultatele activității mele de cercetare, contribuțiile profesionale, științifice si academice obținute în perioada 2005 – 2017, interval de timp în care am desfășurat activitate universitară în cadrul Disciplinei de Medicină Legală a Facultății de Medicină și Farmacie Oradea dar și activitate profesională ca medic legist în cadrul Serviciului Județean de Medicină Legală Bihor - Oradea. Rezultatele științifice și de cercetare obținute în acest interval de timp s-au concretizat prin publicarea / prezentarea a peste 200 de lucrări științifice, la diferite conferințe, congrese și în reviste de specialitate ISI / BDI și participarea la trei proiecte de cercetare. Rezultatele profesionale prin avansarea mea, inițial ca medic legist șef al Laboratorului clinic de medicină legală din cadrul Serviciului Județean de Medicină Legală Bihor – Oradea iar ulterior, din 2017, ca medic șef al Serviciului Județean de Medicină Legală Bihor – Oradea iar rezultatele academice prin trecerea mea pe o poziție de conferențiar în cadrul Disciplinei de Medicină Legală a Facultății de Medicină și Farmacie Oradea.

Teza de abilitare am structurat-o în trei secțiuni principale:

SECTIUNEA A descrie rezultatul activității mele științifice și de cercetare din perioada postdoctorală, în domeniul mediciniei legale. Formarea mea profesională multidisciplinară în medicină legală și drept mi-a permis o abordare complexă a domeniilor studiate. Direcțiile de cercetare abordate sunt:

AI. Cercetări și contribuții în domeniul psihiatriei medico-legale – Prin această cercetare mi-am propus aprofundarea fiecărei etape a expertizei medico-legale psihiatriche de la aspectele etice și legale privind consimțământul pacientului la efectuarea expertizei, la dificultatea stabilirii diagnosticului psihiatric până la rolul medicului legist în comisia de expertiză psihiatrică cu privire la stabilirea gradului de pericolizitate socială a pacientului expertizat și a măsurilor de siguranță medicală recomandate. În studiile efectuate am pus accent pe activitatea expertală medico-legala pe "documente medicale", adică pe "dosarul cauzei" la persoane deja decesate, țiind cont de frevența în creștere a acestor expertize, în contextul emancipării persoanelor, care își apară astfel tot mai mult patrimoniul (moștenirea). Mi-am extins cercetarea pe aspectele psihiatriche și medico-legale la pacienți internați la Cod Penal 110, dat fiind faptul că de peste 10 ani participă în comisa de expertiză medico-legala psihiatrică de reevaluare perioadică a pacienților internați în Spitalul de Psihiatrie pentru Măsuri de Siguranță Medicală din Ștei, unul dintre cele cinci astfel de spitale din România. Pentru aprofundarea cercetării în acest domeniu am participat activ, cu lucrări ce au fost publicate, la Programul Operațional Sectorial de Dezvoltare a Resurselor Umane "Standarde europene pentru programe postdoctorale competitive de formare în domeniul managementului cercetării avansate și expertizii psihiatriche medico-legale" desfășurat în cadrul IML Timișoara. Nu în ultimul rând mi-am axat cercetarea pe problema adicțiilor în psichiatria medico-legala, în mod deosebit pe alcoolism.

AII. Cercetări și contribuții în domeniul traumatologiei medico-legale - Prima direcție abordată continuă cu analiza aspectelor de traumatologie medico-legală. În acest subcapitol am prezentat doar o parte din studiile efectuate și anume cele postdoctorale, dar preocuparea pentru traumatologie am avut-o încă de la începutul carierei mele ca medic legist. Am parcurs doi ani de reziudențiat în domeniul medicinii de urgență iar profitând de acumulările profesionale din acea perioadă teza mea de doctorat s-a axat și pe probleme de traumatologie. Cum în medicina legală
problemele de traumatologie sunt omniprezente mi-am continuat activitatea științifică pe acest domeniu pornind de la cazurile de zi cu zi.

Aspectele traumatologice ce țin de violența intrafamilială au constituit un domeniu predilect al cercetării științifice. Am avut intervenții repetate în emisiuni de televiziune, în presă și la diverse consfătuiri și simpozioane axate pe tema violenței domestice.

Pentru aprofundarea cercetărilor pe această temă am efectuat în anul 2015, la București un tranning național privind traficul de ființe umane intitulat „Îmbunătățirea serviciilor medicale pentru victimele traficului de persoane”.

Articolele au fost adaptate dinamicii evenimentelor soldate cu victime ale violenței de orice fel precum și a traumelor dobândite în diferite împrejurări. Astfel, o parte din articole se referă la accidentele rutiere. O preocupare constantă a fost și aceea de a depista și dovedi care sunt factorii care favorizează violența domestică și alte forme de violență. În acest sens m-a preocupat interferența dintre consumul de alcool, violența intrafamilială sau accident rutier precum și între tulburările psihice, respectiv afecțiunile psihice diagnosticate sau mai degrabă nediagnosticate și diferite forme de violență.

AIII. Cercetări și contribuții în domeniul tanatologiei medico-legale - În direcția acestui dezaifter, efectuând în toată cariera de până acum peste 1200 autopsii am fost preocupată de a fundamenta pe baze fiziopatologice și morfopatologice toate mecanismele tanatogeneratoare. Am încercat să precizez logic și argumentat mecanismul de producere al leziunilor tanatogeneratoare dar și influența factorilor de mediu în stabilirea momentului decesului. Selectând cele mai dificile dar și spectaculoase cazuri de acest fel am întocmit numeroase lucrări științifice. Bazându-mă pe datele experimentale cuprinse în teza mea de doctorat (factori concurențiali în mecanismele tanatogeneratoare) am putut dovedi fără dubiu cauza morții în cazuri controversate. Mai mult, prin analiza riguroasă anatomo-topografică a unor leziuni traumatice osoase am ajuns la concluzii validate ulterior în justiție, altele decât cele precizate în actele medico-legale inițiale.

Am fost preocupată, de asemenea, de stabilirea mecanismului tanatogeneratoare în morțile subite și suspecete, considerate ca cel mai dificil de gestionat în practica medico-legale, cauza decesului fiind, nu de puține ori, greu de precizat.

AIV. Cercetări și contribuții în alte domenii, conexe activității medico-legale – Acest subcapitol prezintă cercetările efectuate în alte direcții pe care le-am abordat și aprofundat și am nume cercetări în domeniul legislativ, al malpraxisului și deontologiei medicale; în domeniul investigațiilor paraclinice medicale și medico-legale.

SECTIUNEA B detaliază contribuțiile mele profesionale, științifice și academice de la începutul carierei universitare și până în prezent. Am inclus în această secțiune detalii referitoare la evoluția mea profesională, la parcursul meu educațional și academic și totodată aspecte referitoare la recunoașterea mea națională și internațională.

La final este prezentat planul de cercetare/dezvoltare al carierei mele profesionale, științifice și academice. Astfel, în ceea ce privește cariera mea profesională, obținerea calității de conducător de doctorat îmi va permite implicarea și participarea activă la consolidarea domeniului medical pe plan național și internațional. Direcțiile de cercetare dezvoltate până în prezent vor fi continue, aprofundate și exploateate, iar noile direcții abordate vor fi legate de cele actuale. Totodată, abordarea științifică a managementului calității procesului de învățământ și de cercetare în domeniul Sănătate vor face parte din preocupările mele viitoare.

SECTIUNEA C cuprinde referințele bibliografice asociate primelor două secțiuni, lista publicațiilor și curriculum vitae.
SECTION A

SCIENTIFIC ACHIEVEMENTS 2005 - 2017

AI. Research and contributions in the field of forensic psychiatry

In the chronological order, some of the research carried out in this field focused on each stage of psycho-legal forensic expertise from the ethical and legal aspects regarding the patient's consent to the expertise, the difficulty in establishing the psychiatric diagnosis to the role of the forensic doctor in the expert commission and not least on the importance of studying the "case file" in this kind of expertise as well as psychological evaluation. The basis of this research is, as I said in my professional experience of over 10 years in this field, including in a psychiatric hospital for medical safety measures, as well as participation in postgraduate training courses.

In my work, I have tried to draw up a guide that will outline the steps to be taken in performing psycho-legal forensic expertise, steps drawn by the forensic pathologist, the head of the commission. I have shown the great importance of medical history data that can be obtained through the practice of the forensic doctor. In this context, we also emphasized the role of psychiatrists in the commission.

In order to increase the quality and value of psycho-legal forensic expertise at a trial, I participated in numerous congresses and conferences of psychiatry (Timișoara, Iași, Câmpulung Moldovenesc). A summary of some of the papers presented are at the end of this chapter.

A1.1. Medical consent in psycho-legal forensic expertise; Ethical and Legal Aspects


Informed and assumed consent is a wish and obligation for any medical act that can cause patient suffering. (Mihalache G., Buhas C., 2007)

For this reason risky therapeutic interventions or even some interventions related to medical investigations should not be performed before obtaining the patient's consent. This consent must be given to the patient to explain to him all the risks involved in the intervention, not excluding, when appropriate, even the risk of death. (Mihalache G., Buhas C., 2007)

The situation of persons undergoing a psycho-legal forensic expertise is quite different.

For an easier understanding of what we will continue to outline, we will point out some aspects related to psycho-legal forensic examination:
- it is done in a committee made up of a forensic doctor and two psychiatrists;
- the psychological examination, which is an integral part of the expertise, is performed by a psychologist;
- the committee may also include doctors from the specialities associated with the person’s diseases, neurologists, endocrinologists, etc. (Belis V, 1995)

The forensic psychiatric expertise is of 4 kinds:
- for criminal cases - where the person under investigation has committed a criminal offense;
- in civil matters - most frequently if banning is under discussion;
- at the request of a person - when it intends to draw up a notarial act and wants to certify that it has the present psychic capacity;
- in acts - when the mental capacity of a person who has made a notary act and later died. (Mihalache G., Ardelean H., 2000)

The last two categories of expertise listed do not call for consent because it is presumed that if a person makes a request for expertise, he / she gives his / her consent at this medical
examination. Of course you can not ask for consent to an expert's examination of a deceased person or the followers of that person.

In the first two types of expertise, however, the consent of the person who will be examined is under discussion.

In the new Penal Code and the new Criminal Procedure Code are numerous and relatively well formulated articles:

Article 184 of the Criminal Procedure Code entitled: The forensic examination provides in paragraph 3: "The forensic examination shall be carried out after obtaining the written consent of the person to be subjected to the examination, expressed in the presence of a chosen or ex oficio lawyer, before the judiciary and in the case of the minor and in the presence of the legal guardian."

Paragraph 4 of that article states: "If the suspect or defendant refuses to perform the expertise during the criminal prosecution or is not submitted for examination to the psychiatric forensic commission, the criminal investigation body shall notify the prosecutor or the judge of rights and freedoms in order to issue a referral order, for the purpose of presenting it to the psychiatric forensic commission."

Paragraph 5 also provides: "If a complex examination requiring the medical admission of the suspect or defendant to a specialized health institution and refusal to admit it is necessary, the forensic committee shall notify the monitoring Criminal Court or institution on the need to take the measure of involuntary admission."

Next, there are 22 provisions to this article, which mainly regulate non-voluntary internment.

The purpose of all these stipulations is to avoid any form of psychiatric abuse.

In practice, obtaining consent is not as easy as it would seem because:

- we refer to patients, psychiatric patients, suffering from affections that alter discernment in the sense of absence or reduction. A denial of such a person to give their consent is, in effect, nullified as long as the person has no discernment;
- on the other hand, the expertise must always be done precisely to indicate the illness the patient suffers from, the lack of judgment, the application of medical safety measures, the obligation to be treated or hospitalized in a psychiatric hospital for the application of medical safety measures.

An apparent paradox of obtaining consent in both criminal and civil cases is that, as the legal norms mentioned above, it has to be taken by the criminal investigation institution, although it refers to a medical act as a last resort. (C.C., C.P.C., 2014)

In civil cases, when putting under the ban, reconciliation can take on a formal character as long as it is demanded by older people, most often with severe psychiatric disorders of the dementia category.

Analyzing the situations in which psychiatric forensic expertise is required, we appreciate that, practically always, this medical approach is to the advantage of the persons under examination and this is why:

- In criminal cases, the reason for which the criminal investigation committee asks for expertise is doubt about the mental health status of the person it investigates:
  - If the person examined does not have a mental illness or has a mental illness that does not affect his / her discernment, he / she is sued and possibly later convicted;
  - if, on the contrary, it is established that he has a mental illness that has led to the lack of judgment, he is irresponsible from a legal point of view, a situation where a medical safety measure (compulsory treatment or admission) must be applied.

The question is how would the investigation be carried out in any of the versions above if the person does not consent to the expertise?
As a conclusion of those presented, I believe that obtaining consent for psycho-legal forensic expertise could be useful if it would benefit both the person being examined and the course of the investigation, but in practice I have not encountered such a case.

Not wanting, this approach, which is being done precisely to avoid psychiatric abuse, can become a formality without any use.

An additional argument that makes obtaining consent as a formality is that if the person refuses to give his consent to the expertise, the next legal step is his involuntary admission, which obviously occurs without obtaining the consent.


It is well known that a major social problem in Romania is the fact that a significant part of the active population benefits from a sickness pension or disability pension. This is also the case in Bihor County.

Those individuals have diagnostics in all areas of forensic pathology, often serious diagnoses, and it is surprising that, after years of receiving or being classified as disabled, they still live or engage in different businesses like: private protection and security firms, taxi companies, in construction, computer firms. Often, these people are also holders of a driving license.

Sooner or later, because of illnesses that people present, diseases often established on socio-human reasons, there are also consequences that disadvantage these people. First of all, that person may have his driving license suspended or he can not acquire it through the examination. Another consequence might be the inability to perform different activities or to continue their studies to obtain a university degree, etc. Sometimes these people can not get a gun permit, so they can not be hunters, policemen, soldiers, guards, etc.

A particular category of people who suffer the consequences of overdose diagnoses are those who, in the desire not to perform the military service, were classified as non-combatants after medical visits, possibly hospitalizes, occasionally with overdiagnosis with affections like: Serious mental retard status (imbecility) or epilepsy with behaviour disorders or psychopathy with schizotypal elements.

All of them will sooner or later come to a legal medical service to be re-evaluated about their state of health through a forensic medical certificate. In fact, they want to find out a certain fact: they have no affection of which they have been diagnosed in their history and which is noted in their medical records.

Here are some examples, two of which in extenso, in which we had to evaluate by psychiatric forensic expertise people with unreal psychiatric diagnoses:

Example 1: A young man who builds a school for social reasons (a large family, difficult to maintain) has diagnostic of severe mental retard status (imbecility), but after graduation he continues his studies, he graduates high school, then faculty and becomes a computer company administrator. Due to childhood diagnosis it has difficulty in drawing up the medical record for obtaining the driving license. Conclusions of forensic psychological expertise: he dose not suffer from mental illness. QI 107.

Example 2: A young 25-year-old Roma can not get the car driving license because she is in evidence at the Military Hospital with diagnostic: Sequelae of meningoencephalitis. Serious mental retard status with behavioural disorders. At the psychiatric forensic examination, diagnostic was denied in the sense that she did not have the symptoms of a mental illness, had no behavioural disorders, did not have any treatment, was married, with children, and did an efficient self-employed activity.
Case presentation 1: C.G., from C, investigated for committing the threat offense. In June 2010, psychiatric forensic expertise is required to determine whether he or she has discernment of his actions. In the course of carrying out the expertise, the petitioner presents a Disability Certificate issued in 2001 resulting in: Idiopathic Epilepsy with frequent Grand Mall seizures and psychiatric disorders. Diagnostic of functional impairment - severe handicap, validity - permanent. The psychiatric examination carried out in 2010 - the wife and the deceased children, is alone under the care of a consular with 4 classes, in his youth he worked in the uranium mine, then at CAP, presents hearing loss and that is why he communicates more difficult. Elementary personality, slightly expansive. Cognitive difficulties with hypoprosexia and hypomnesia, poorly censored behaviour, recognizes alcohol consumption, self-administering itself without problems in the community (information from the policeman in the commune) Psychological exam: the examination of intellectual functions reveals diminished functions with elements of mild cognitive impairment - gets 24 points at MMSE. There are attentional fluctuations, difficulty in concentration and comprehension, mild temporal damage, spatial orientation. Light mimetic deficit accompanied by false memories, lack of motor-visual coordination. In the content of thought, prevailing ideas of prejudice (from his brother). Ambivalent personality with increased tendencies towards emotional lability, infantilism, generalized anxiety, psycho-motor anxiety. Expansive. Disharmonic verbal status. Recognizes frequent use of alcohol at present. Difficult collaboration due to hearing loss. It reveals (Koch test) the ego's expansion, censorship effort, adaptation difficulties, recent or old affective conflicts, introversion, poor operativeness of thoughts, schematism, infantilism, marked agitation, unconscious tendencies developed, predominant instinctually, superficiality, separation between the conscious and the unconscious, without the ability to complete tasks. EEG - fast, irritating alpha route, unchanged in DO and hyperpnea.

The conclusions of the psycho-legal forensic expertise in 2010: a. The so-called C.G. has medical records showing that he suffers from epilepsy with frequent Grand Mall seizures and mental disorders. He denies these ailments. B. There are no major psychopathological disturbances at the time of examination that could affect his psychic competence. For this reason we appreciate that at the time of the examination in committee the suspect has discernment; He also had discernment at the time of the act; This does not require the application of medical safety measures.

Discussion of the case: the diagnosis in 2001, made at that time for obtaining a disability pension was denied on the occasion of the psycho-legal forensic examination in 2008 that he did not really exist. His existence would have made the patient not responsible for criminal acts.

Case presentation 2: LL, 54 years female, from S. Psycho-legal forensic expertise is required to determine if the suspect suffers from any medical condition, what degree of disability can be accommodated by considering a Criminal investigation file against the accused MAL + 7 for committing offenses of abuse of service against interests of persons, instigation of false intellectual and false statements, abuse of office against interests of persons and forgery of intellectual documents, consisting in the fact in order to obtain beneficial material. Accusations by MAL has led more people to issue medical records and L.L. was classified as a person with a grade of disability.

The objectives of psycho-legal forensic expertise are: What are the illnesses the person called L.L. and what medical records prove this; In a positive scenario, in which category of disability the illnesses are framed; If it can be established that in the past L.L. has suffered from a condition that falls within the high degree of disability.

The examination of the suspect in a psychiatric forensic commission was conducted in August 2011. Given the complexity of the case, hospitalization and re-examined wore recommended for the patient by a commission after discharge. On the occasion of the re-examination the patient was hospitalized in Oradea Neurology and Psychiatric Hospital with OS no ... for a week in August 2011 with the admission diagnostic: Diagnosis, law-case. DGS. Discharge: Reactive anxiety disorder. Varicose disease. AHT.
From the Social Survey, prepared in August 2011, by the City Hall of S, at the request of the Clinical Hospital of Neurology and Psychiatry Oradea, we remember: from the marriage of L.L. with L.Gh.D. 8 children were born. The whole family lived at No ... in the S village one year ago when they actually reconciled, now being in divorce. At this number, L.L. currently lives together with her male children in a building composed of 3 rooms, bathroom, kitchen and household spaces. The other children (the girls) and the husband of one of the girls live with their father, still in place S, but at another number. L.L. declares that her husband has moved and is no longer in touch.

From the conversation with one of the neighbours (Mrs. B.M., aged 80), results that she has never had problems with her neighbours, she is a person at her place, hardworking, able to raise eight children. Of those mentioned by another neighbour of L.L. (Mrs. CM aged 45 years), who has known her for 4 years, we remember that the suspect is appreciated as a reliable, jump, helpful and a common sense person “Despite the troubles she faces”. Head of the Police Station in place S. says that the suspect did not create problems for the police in terms of public order and states that she is known in society as a person with a positive behaviour.

From the case file we take the following medical records with reference to the medical history of the suspect:

- The report of the Bihor Public Health Authority no. ... of November 2010, which shows that the suspect had multiple admissions to the Hospital of Neurology and Psychiatry Oradea: December 1981, the following diagnostics: Neurasthenia; October 1982 the following diagnostics: Asthenic nuisance with pitiative elements; June 1983, with diagnostics: Neurotic astheno - cenesthopathic syndrome. Myocardiopathy?; March 1984 with diagnostics: Neural impairment with functional elements; June 1985, with diagnostics: Neurasthenia with functional elements; July 1988 with diagnostics: Neural impairment, pregnancy 26 weeks; January 1991, diagnostics: Pitiative Neurosis; August - September 1993, diagnostics: Pitiative Depressive Decompensation Structural Fund ... indecipherable; October 1993 with diagnostics: Structural basis Depressive Decompensation; January - February 2007, with diagnostics: recurrent depressive disorder, mean depressive episode with atypical features; April 2009 with diagnostics: Recurrent depressive disorder, severe depressive episode with psychotic elements. The medical documents mentioned in this report have been checked and confronted by the members of the psychiatric forensic expertise committee with the clinical observation sheets removed from the archives of the Hospital of Neurology and Psychiatry Oradea.

- Photocopies of hospital exit tickets and other medical records: The hospital exit sheet from Nucet Hospital of Psychiatry shows that she was hospitalized between October and November 1982 with the diagnostics: Asthenic Neurosis with psychotic elements; The hospital exit sheet from Nucet Psychiatric Hospital shows that she was hospitalized between February and March 2009 for diagnostics: recurrent depressive disorder. Severe episode with psychotic symptoms; A medical certificate issued in May 2009 by the Clinical Hospital of Neurology and Psychiatry Oradea, which shows that she was taken into account by the Adult MHO in December 1981 with diagnostics: Asthenic neurotic syndrome. She had multiple admissions, the last in April 2009 with diagnostics: Severe depressive episode with psychotic elements. She presented for examinations and treatment through MHO Adults, the last being in April 2009 with diagnostics: Recurrent depressive disorder. Severe depressive episode with psychotic elements; A specialty report for disability grade in April 2009 where the diagnostic is listed under "Clinical Diagnosis": Recurrent depressive disorder, severe depressive episode with psychotic features. Under the heading "The onset of affection" is the year 1980, at the age of 26 years. In the section "hospital admissions" are mentioned the years: 1981, 1983, 1984, 1987, 1991, 1993, 1997. Treatments followed: antidepressants, antipsychotics, sedatives, monthly control by
MHO Oradea: A Disability Certificate in May 2009 where "disease code" states: F 33; To "disability code": 5 (neuropsychic); Disability degree - accentuated; Date of acquisition: 1980; Date of revision of the certificate: May 2010; A Disability Decision in October 2009 of the Superior Commission for the Assessment of Adults with Disabilities, Bucharest diagnostics: Deep Thrombophlebitis Lower Members with Embolic Risk. Hypertension. It states: "they do not fit into the medical criteria approved by Ministry of Health and Family order 726 / 10.2002. She was examined in committee on .... 2009. She presents many diseases". It is also stated: "disease not handicap"; A Psychological Review of January 2009 from the Psychology Laboratory of the Clinical Hospital of Neurology and Psychiatry in Oradea shows: "The Szondi test: I inhibited and projected. Actions are becoming more and more aware. Judgments change under the influence of emotions. Pulse of ethical and moral behaviour: sudden fear, in the access, which the individual tries to escape through a violent reaction. Personality acting-out. Low moral censor (hy) and desire to highlight. Pulse of contact: alienation of the world. Unhappy connection. Hasty, unstable relationships. Frequently hypomanic personality. Distress, agitation, diminished attention. Sexual Pulse: Aggressiveness and Activity, Infant-like Energy. Primal, infantile, stubborn conduct. Egocentric rigidity ".

The psychiatric examination carried out by the psychiatric forensic expertise commissioned in August 2011 reveals: Relatively neat person. Face slightly anxious. Denies perceptual disturbances. Voluntary hypoprosexia. Unmodified, clear, memory. Coherent thought, continuous flow, judgment and reasoning correctly performed. The content of more elementary thinking (8 classes), concerns about last-year events that she "can not explain". A low sincerity index, hesitant or can not explain the circumstances through which it has gone through intra-familial tense relationships. Moderate anxiety, psycho-motor disturbance, intrapsychic tension. Difficulties in integration and inter-family relationships. A history of severe, repeated depressive episodes.

The psychological exam conducted in August 2011 in the Psychology Laboratory of M.H.O. - Adults (on examination within the expert committee): Lower intellectual level. QI = 87. The examination of intellectual functions reveals a lack of mind computing and logical capacity. Loquacious. In the content of thinking, there are prevailing ideas of injury (from the husband). Denies changes in the sphere of perception or other changes in the sphere of thought at present. Introvert personality, with slightly increased tendencies towards irritability, nervousness (reactive). The S100 questionnaire, subscale irritability, dementia, schizoid, paranoid, does not reveal any accentuated features. It reveals (T. Koch): self expansion, instability, censorship effort, adaptation difficulties, recent or old conflicts, isolation. It denies behavioural disharmony.

During hospitalization, the suspect was examined psychologically at the Psychology Laboratory of the hospital, during where this was found: Lower intellectual level. QI = 85. Cognitive functions within normal limits. Introvert personality with slightly increased psychomotor instability (W-M test). Moderate anxiety index (43 points) and low trait (38 points) - Stay test. Resistance to self-reflection (dissimulation). The degree of neuroticism in normal limits but the low sincerity index (ENL: L = 8 points). The Szondi test reveals: An inner personality that adapts under the constraint of external forces. Inner self inhibited and projective. Low self-knowledge. Pulse of ethical and moral behaviour: a crisis of affections and feelings. A Cain who is hiding bashful and is inhibited. Contact pacing: Unhappy bonds, hypomaniac. Lack of support and restraint. Hasty relationships. Unstable interests. Sexual Pulse: Exaggerated self-evaluation (over-appraisal).

It is highlighted: (Luscher test): 1. Desired Objectives: feels the need to identify with something or someone. She longs for a tender bond and an ideal state of harmony. She needs affection. Sensitive to aesthetics; 2. Existing Situation: Unsure hopes and inability to decide on the necessary remedial action. The situation causes considerable stress; 3. Behaviour inappropriate to the existing situation: she feels uncomfortable and looks for a way out. Capable
of gaining satisfaction from sexual activity, showing that it is not an emotional disorder; 4. Rejected characteristics: frustration due to restrictions. She needs independence and freedom. Lack of the power required for success and respect; 5. Current Problem: Try to avoid criticism. She wants to decide on his own by showing his personal charm.

EEG Exam: EEG route with alpha waves, no pathological trace elements.

The conclusions of psycho-legal forensic expertise are: a. L.L. does not present major psychopathological disorders at the time of examination. Her diagnosis of discharge was Reactive Anxiety Disorder, Varicose Disease, Hypertension; B. Like has been pointed out and as it results from the medical documents outlined above, the present affections are not among those that confer the person the status of a disabled person; C. Regarding the affections presented in the recent past, they were supported by appropriate symptomatology and benefited from the appropriate treatment. It has been and is the duty of expert doctors who signed the Disability Certificate to determine whether the illnesses they present at that time are falling into the degree of disability.

Case Discussion: L.L. had a psychiatric past and had been treated as early as 1981 for the diagnostic of anxious Neurosis. The stage diagnosis, established in 2009, namely recurrent depressive disorder, severe depressive episode with psychotic elements, hypermetrized diagnosis most likely to be obtained for a disability pension with the consent of the patient at that time, was subsequently disputed by her when the circumstances evolved with the attempt of a family member to set an interdiction in order to acquire the property of the person (or of the mother), taking the case with a criminal content. It is obvious that, in this situation, the psychiatric forensic examination commission has had a difficult task, namely to establish with certainty the actual mental health status of the patient at the time of the examination in committee, and more, at the time of the last admissions of her in the hospital. It was found that the correct diagnosis was reactive Anxiety Disorder, a diagnosis that made the patient maintain the discernment of her actions, and excluded the banning of the patient.

From the clinical cases presented, it is important to know the accuracy of the expert diagnosis, the accuracy of the diagnosis in the imminence of the expertise, the accuracy of the clinical diagnosis at the time of the specialist examination to prevent some socio-material and legal consequences that may affect the person concerned but also the professional (who could be "dragged" into court) who has shown a misunderstood goodwill.

At the end of the paper we emphasize once again that the expertise should be focused on defending the interest of the expert but in the spirit of absolute objectivity. The same impartiality and professional rigor must also be exercised in the development of some diagnoses that at one point seem to be in favour of the person but which subsequently, during its existence, become obstructive elements in the social function of the person (the subject) altering his quality of life.

AI.3. Innovation about the medico-legal psychiatrically report: the report requested by persons that intend to pursue acts that have an alienation value. (Agora International Journal of Juridical Sciences, Agora University Publishing House, Oradea 2009, ISSN 1843 – 570x, pp. 155 - 157)

In general the acts that have an alienation value are notarial acts such as testaments, selling and buying contracts, donations, and maintenance contracts etc. They are all based on a transfer of ownership. (Belis V., 1995) Most often, those properties have a low or medium value, but in some situations we can have considerable fortunes (houses, lands, important amount of money, etc.).

Most often, the person that intends to pursue such acts is an elder, a widow or widower that has to decide about the goods for their lifetime, and especially what would happen after one’s death. For eliminating doubts regarding the legal competence of performing or the discernment, a person that has to indite such an act of alienation can request a medico-legal psychiatrically report that would answer to that objective. For a better understanding of the medico-legal psychiatrically report, it is important to present a few legislative and methodological aspects. The
medico-legal psychiatrically report is included in the reports category, reports that are being performed only if they are officially requested through an ordinance, by one of the three state institutions: Police, Prosecutor’s Department and Court. This kind of reports are requested for criminal cases when it is examined a person that has committed a crime sanctioned by the Penal Code. Other medico-legal reports are requested for civil cases such as divorces, entrusting the minor children etc. Also, there are situations when a medico-legal psychiatrically report is solicited in the case of a deceased person that during its lifetime has performed acts of alienation that were soon after disputed because of the lack of discernment of the person, due to a disease. This is the case of the medico-legal psychiatrically report on documents. As we already stated, to these three types of reports it is added the requested medico-legal psychiatrically report, that is used on live persons that solicit to be examined so they can prove that they have discernment when performing an act of alienation. In other words, these persons want to “protect” the notarial act with a medico-legal document that would attest during lifetime and also after death that the person had discernment when the act was performed and signed. (Dragomirescu V. T., 1980)

Methodologically, this act is called “health condition certificat” because it is not officially requested by the Police, Prosecutor’s Office or Court of law, but its content is identical to a medico-legal psychiatrically report and is performed according to the rules that guide this kind of report. The commission is formed by one forensic expert, two psychiatrists and a psychologist that performs the psychological exam, also other doctors according to the diseases that the examined person presents. All these doctors are written on the medico-legal document that is given to the examined person. This health condition certificat, a genuine expertise, is performed only after the person requesting it, writes a petition to the Medico-Legal Department, motivating its request of the document. (Belis V., 1992)

This kind of medico-legal report was rarely requested before 1990. In a district like ours, there were no more than 10 requests in a year. Nowadays, things have changed because the term of private property is truly respected, and even mentioned in the country’s Constitutions. Nevertheless, not only that it is respected by the law, but people’s mentality regarding the private property, has changed; it has to be constituted, preserved and ceded so that it would create malfunctions neither for the owner, nor for the one receiving it.

The number of these kinds of reports has grown within every year; one of the contributing factors is the growing number of owners.

These days, there is an emancipation of the population juridical speaking, mainly because people understand that a smaller or bigger fortune, achieved through hard work and sacrifice, must be respected during lifetime, and after death transmitted to family members or state institutions that deserve it. Arguments arise between potential successors when real values are involved, and those that feel left out dispute in any way the most common notarial act, motivating that the person that performed and signed the act had a lack of discernment due to an illness. As we stated, the dynamic of this kind of report has been impressive during the past 20 years. There was a slow growth of this type of report at the beginning of the 1990’s, but starting with the year 2000 the number has increased tending to equalise the number of the reports officially solicited in penal and civil cases. (Belis V., Gangal M., 2002)

Compared to the other types of medico-legal psychiatrically reports, the requested medico-legal psychiatrically report has some peculiarities. First of all, the correct term that we have to refer to, is not the discernment, but the legal competence of performing. It is preferable to use the term discernment or the lack of discernment only for medico-legal psychiatrically reports in penal cases. In these cases, we have to assess the discernment strictly referring to the moment of the crime for which the person is investigated. The legal competence of performing is part of the global psychic competence, which has connections with the extensive term of discernment. In practice, the persons that have a lost discernment are considered to have neither psychic competence, nor legal competence of performing. Nevertheless, there are exceptions: a person that has a serious mental illness like schizophrenia, does not have discernment, but under treatment, on a level of improvement might have legal competence of performing. Most often,
the persons that have diminished discernment because of a mental illness don’t have legal competence of performing. The psychological tests and examinations that are done on people that solicit this kind of report must show the physiological deterioration value. Because we work with old or very old people (over 70 or 80 years), it must be taken in consideration the multiple chronic affections that they present, and that can directly or indirectly influence their legal competence of performing. Such situations could be: diabetes and its complications (cecity, diabetic arteriopathia, etc.), neurological conditions like vascular cerebral stroke, Parkinson or Alzheimer disease, ophthalmological conditions with sight disorders, the otolaryngology conditions (deafness). Through their symptomatology, all these conditions and especially their consequences, that is often invalidity, can influence a person’s legal competence of performing. All of the above state that it is very difficult, but extremely important to perform a medico-legal psychiatrically report on one of these persons. (Scripcaru Gh. et al., 1983)

We realised the utility of these acts when performing medico-legal psychiatrically reports on documents for which we received large files filled with this kind of acts. They talked about the situation when some of the potential successors contest the notarial act performed by the deceased, motivating the lack of discernment or the lack of legal competence of performing of the one that performed the act. The successors argue and try to prove with medical entries that the deceased was too sick to have discernment at the time the notarial act was performed. Most often are presented hospital release records, copies of clinical observation charts, prescriptions, medical records, invalidity certificates, labour ability decisions. (Scripcaru Gh. Et all., 1979)
From these acts we remember that the person was suffering of cancer and had metastasis, or was paralysed, not talking, was an alcohol consumer or any other clinical condition. There are very few medical records to truly result from, that the discernment was affected because of the person’s severe mental disorders. The great difficulty of such a report is that the person cannot be psychiatrically examined because is dead for some time. The report can be easily performed by just repeating the conclusions if found in the person’s file a requested medico-legal psychiatrically report that was done directly on the person while still alive, report that shows that at the time of examination the person had legal competence of performing. (Quai I. et al., 1978)
The notary public has an important role for the performance of the report. Being solicited by elderly persons to perform alienation acts, they are the first that might have doubts regarding the legal competence of performance of that person. Before performing the notarial act, a good faith notary would suggest the client to have a medico-legal psychiatrically report performed. Knowing the legal importance and as a conclusion to all the above, we plead for the growth of the number of this medico-legal psychiatrically report. Within legal boundaries the reports can be better performed, for example it can be subject to the law that each person that has a mental disorder or has over 70 years must go thru a medico-legal psychiatrically report before performing an alienation value notarial act. Through laws that allow the preservation and the transfer of ownership, our legislation would be line up with the legislation in many European countries that respect the private property. (Franchini A., 1979)


The measures of medical safety prevailed by the Criminal Code are most of all stipulated in articles no. 113 and 114. Article no. 113 stipulates for the duty of the psychiatric treatment and presents the following particularities:
- The treatment must be done under severe watch, periodically, in a mental institution belonging to the Ministry of Health, most frequently in the Laboratory of Mental Health. Here, the patient receives medication treatment in accordance with the opinion of a doctor (a daily, weekly or monthly treatment, etc) and all of these are supervised and signed in a register. Due to this fact, the patient can be easily tracked whether he or she is
following the precise treatment or not.

- Article no. 113, which represents the obligation to a medical treatment, can be also used on persons (patients) that are imprisoned. In this circumstance, the treatment can be applied in a penitentiary hospital or in the nursery of the imprisonment’s place.

- The application of the safety measure stipulated by article no. 113 can be done on mentally disordered patients lacking judgement.

The measure of medical safety stipulated by article no. 114 refers to the duty of hospitalization in a psychiatric institution with a special profile. The particularities of these special procedures are, as follows:

- The procedure is applied only if the patient has a severe psychiatric disease. The procedure refers to the specific situation when the patient lacks judgement at the time that the felony was made.

- The measures of medical safety - represented by article no. 114 - lasts until the complete recovery of the patient or until a considerable improvement can be noticed.

From the juridical point of view, the following are to be noticed:

- If the patient do not correspond with the stipulations in article no. 113, the law sentence can decide the application of article no. 114, if and only if was established, based on a forensic psychiatric examination, the fact that the patient did not have, nor still has the ability to judge for himself.

- It is possible to return to the stipulations in article no. 113 after the application of article no. 114. The action is possible only after a new forensic psychiatric examination is made and a new law sentence is given.

One of the 5 psychiatric institutions in the country dealing with mentally disordered patients hospitalized under article no. 114 is in Stei, a city from the area of Bihor. The law compels for a periodical examination of these patients by the doctors. More than that, if the patient, doctor in charge of the patient other relatives ascertain a considerable improvement of the patient’s health, or if the psychiatric signs are gone, a new forensic psychiatric examination can be made. If everything turns well, the measures of medical safety can be changed, substituted for another or even suspended. Starting from the theoretical considerations mentioned before and based on more than 300 forensic examinations made annually in the Psychiatric Institution from Stei, we are able to present the difficulties and errors faced when applying the measures of medical safety. These are, as follows:

- When a patient is hospitalized in the Psychiatric Institution from Stei, his medical record arrives together with him. This medical official report contains the forensic psychiatric examination, based on which the patient was included in the stipulations of article no. 114. The forensic psychiatric examination mentions the diagnosis of the mental disorder the patient suffers from. Sometimes, the diagnosis doesn’t correspond with the symptomatology of the patient or the diagnosis doesn’t justify the proposal of application of article no. 114. In this situation, the doctors in charge of the patient and the new forensic and psychiatric committee have the ungrateful duty to formulate a new and correct diagnosis and to suggest another measure of medical safety. This situation might and can “transfer the patient from the hospital directly to the penitentiary”.

- The symptomatology of the psychopath is often wrong diagnosed because, starting from their capacity to simulate and dissimulate, the case is diagnosed as a psychosis and the conclusion is the appliance of article no. 114. Anyway, a psychopath’s place is in the penitentiary, and not in a hospital. This situation puts in danger the entire crew of doctors working in a psychiatric institution because of the patient’s behavior, he is impossible to manage, and he is unable to be kept in an institution of that kind. The psychosis has no treatment and cannot be cured.

- Very often, the psychiatric symptomatologies, which brought the patient into a psychiatric institution and oblige the stipulations of article no. 114, rely on alcohol consumption. Chronic ethylism at persons with mental sickness or psychoses of any kind makes the gravity of their behavior enormous; the psychic symptomatology is very
impressive, of a great intensity. But, once stopped the alcohol consumption, everything vanishes with the following consequence: in the hospital, there is a patient without a symptomatology that can justify a diagnosis that led to the application of article no. 114. The Psychiatric Institution for Mental Disorders in Stei guarantee, due to the strict security, the certainty that those patients cannot bring in nor consume any alcohol. Because of this reason, numerous patients ask for their release from the hospital after a shorter or a longer period of time. Basically they are not in need of a medical treatment anymore, but, as we already said, the release from a mental institution can only be authorized by a law sentence that would replace article no. 114 with article no. 113.

- As we all know, the severe psychiatric disorder (first of all the psychoses and then the epilepsy and the Central Nervous System disorders of any kind) have no treatment and their evolution develops from bad to worse. From this point of view, article no. 114 is limited and doesn't picture the reality. It stipulates that the period of the application is until the entire recovery of the patient. In reality, we consider the disappearance of the psychotic symptomatology a consequence of the patient’s response to the medical treatment. This is the situation of the mental disorder persons (a schizophrenic), which lack judgement in the acute moment of their disease, and then regain the power of self-judgement for months or even years. Basically, the patient doesn’t how any symptomatology, but still has to follow the specific medical treatment. This is the ideal situation in which we can replace article no. 114 with article no. 113.

- Far more difficult is the replacement of article no. 114 with article no. 113 regarding mental debilities. No matter what a non-compos mentis person treatment is, one cannot expect an improvement of his intellectual performance. But if the patient has a strong social support (parents, family, collectivity per general) and, most of all, doesn’t consume any alcohol, a non-compos mentis patient can easily integrate back into the community. His release from the mental institution and the replacement of the safety medical measure is justified.

- One of the most difficult situations we deal with are the patients whom evolution goes from bad to worse and then end up going mad. In this situation, the replacement of the safety medical measure is out of question, but still, they cannot remain in the Psychiatric Institution from Stei for the rest of their lives. These kinds of patients belong to the Severe Mental Disordered Person Institution from Nucet, for example. Unfortunately, the actual legislation do not authorize the transfer of the patients subscribing article no. 114 to another clinical institution than one of the 5 psychiatric hospitals with special profile from the country, where special security measures are applied.

In conclusion, framing one of the safety medical measures prevailed by article no. 113 or no. 114 is an act of great medical responsibility. It cannot be fully sustained without a disciplinary activity. This means complaisance from the law court and help from the social services.


Psycho-legal forensic expertise occupies a special place in the activity of any legal medicine service. However, there are only a few localities in the country where there are hospitals with a special psychiatric profile, where there are hospitalized patients to whom the medical safety measures provided by art. 114 C.C. Among them is the hospital in Stei, Bihor County. The legal practitioners in these counties have an extra burden because current legislation provides for the mandatory assessment of patients in these hospitals, from the point of view of their health status, twice a year. This assessment is done through psycho-legal forensic expertise.

We have a great experience, spread over more than 20 years, in this field and we intend to share part of it with our colleagues.
Over the years, the average number of patients under Art. 114 C.C. at Stei Psychiatric Hospital in Stei wore 160 male and female patients with a 5:1 ratio between men and women. Patients from this hospital come from the following counties: Sibiu, Satu-Mare, Salaj, Maramures, Brasov, Cluj, Alba, Arad, Covasna, Harghita, Mures, Bistrita and Bihor. They have been expertised before the safety measures provided by Art. 114 C.C. wore replaced with those provided by art. 113 C.C. or when it was considered appropriate to cease the application of medical safety measures. The expertise is done in both situations at the request of the patient, the caregivers or the treating physician. As a rule, patients, willing to go home, are requesting to be subjected to forensic psychiatric expertise. The responsibility of the commission is very high, starting from the provision stipulated in the Criminal Code at art. 114: “when the perpetrator is mentally ill or toxic and is in a state of danger to society, it is possible to take the measure of hospitalization in a specialized medical institute until healing”. It is not the place and the moment to be theorist here about what it means to heal a psychological condition, which is usually serious, which leads to loss of discernment, respectively the application of safety measures provided in art. 114 C.C. The legislator, however, uses the phrase “heald” and for this reason theoretically, the vast majority of psychiatric patients under art. 114 C.C. should remain in hospital all their lives. In reality, this does not happen because the psychiatric forensic expertise committee considers the significant improvement in the patient's well-being, primarily through clinical development and compliance with treatment. To these first aspects there are others added, among which, first, there is the social support that will benefit the patient after his departure from the hospital. Although, it is noted the role of committee members to know what the patient's fate will be from when he leaves the hospital, we try to imagine it based on a few realities:

- In the records of each patient, the visits he receives and the family members make visits are past;
- It also notes who sends money or packages to the patient, who is looking for him on the phone, with whom he / she corresponds;
- Without exception, a commitment from a member or several family members is required to assume, in writing, the obligation to support, first and foremost from a material point of view, the patient after discharge and to observe his / her treatment;
- It is proposed that the patient be banished, as the case may be, when it is obvious that he can not administer his movable or immovable property.

In essence, the criteria leading the proposal to replace the safety measures provided by Art. 114 C.C. with those provided by art. 113 C.C. are the following:

- symptomatology of psychotic type;
- good or very good compliance with treatment;
- adaptation and participation of the patient to a social reintegration program;
- the general behavior of the patient, during hospitalization, towards the staff and to the other patients;
- the presence of one or more family commitments, which may suggest that they have adequate social support;
- a social inquiry from a competent institution at the patient's home, which will reveal the conditions to which he will benefit after discharge.

All the above must be found in the contents and conclusions of the forensic psychiatric expertise carried out in the psychiatric hospital.

It is obvious that this expertise from a methodological point of view should have all the components of an ordinary psychiatric forensic expertise, but it has many particularities that substantially differ from the expertise that leads to the hospitalization of the patient psychiatrically, respectively the application of the provisions of art. 114 C.C. and these differences are:
- the diagnosis of the psychiatric condition must obviously should be other than the one in the first examination, it must prove a significant improvement in the state of health or even in the healing of the patient. It is, in fact, about the ability to prove and to be able to claim with objective criteria that the patient has had such an evolution under treatment that at the time he left the hospital, the potential for social danger, due to the mental illness, is very low or absent.

- references to patient discernment are no longer relevant, because the assessment of discernment, responsibility or irresponsibility, is the objective of the initial expertise that led to the hospitalization of the patient. Logically it would be when the patient is discharged or replaced, the patient has a discernment, but we all know that in reality it is not always so and that is why we should not even refer to him anymore;

- In the expert's opinion, and even in the conclusions, very clear recommendations must be made regarding the treatment and the life regime because, as a rule, the transition is made from Art. 114 C.C. to Art. 113 C.C. which states: "If the perpetrator, due to a disease or chronic intoxication by alcohol, narcotics or other such substances, poses a threat to society, he may be required to attend regular medical treatment until healing. When the person to whom this measure has been taken is not regularly treated, medical hospitalization may be ordered". Therefore, it is clear that the patient's social support, the fact that someone in the family can give him a home and especially can watch him follow the treatment and not drinking alcohol is absolutely necessary because otherwise the patient will return very quickly to the hospital, at best due to not attending treatment and in the worst case for committing new serious antisocial deeds.

One particular feature of this type of expertise, which also provides a great advantage, is that the two psychiatrists who are part of the committee are in fact the patient's physicians and physicians in the hospital where the patient is hospitalized. It is obvious that this situation is advantageous and beneficial to the experts because the doctors are the ones who can be guilty about his progress because they treat and pursue the patient for years, his hospital activity, the compliance with the treatment, the periods of decompensation with that symptom.

The vast amount of non-medical information we need is provided by the lawyer and social worker, both psychiatric hospital staff, who have to participate directly in the expertise and provide, on the basis of their specific investigations, real, conclusive and usable data. We propose that these two people be nominated, with name and function, in the preamble of psycho-legal forensic expertise.

The obligation to periodically assess is twice a year, all hospitalized patients require a very high volume of work, more specifically, in the case of the Stei Psychiatric Hospital, about 320 extra expertise a year. To these the ones which, as we have seen above are added, we make them at the official request of the prosecutor's office, when the mechanism of performing the expertise was triggered by the patient. We have not yet found a legal way that these expertise to be paid, and even more, it seems that we will not find the source of payment for about 320 expertise / year in addition to what we have done so far.

The first quality criteria of this type of expertise should be the following: the patient will never return to the hospital, so he will no longer commit antisocial deeds that would put him under the scope of Art. 114 C.C.

The forensic examination performed to patients under Article 114 C.C. must therefore be structured on three axes:

- medical axis (diagnosis, symptomatology evolution, treatment);
- social axis (family support, livelihoods, resumption of the basic profession, reintegration);
- legal axis (responsibility, irresponsibility, lawbreaking potential, medical safety measures, suspension of medical safety measures).
Based on the above-mentioned theoretical considerations, we conducted a number of 235 forensic psychiatric expertise at Ștei hospital from 1 January 2007 to 30 July 2008. The findings of these experiments can be grouped as follows:

- In 65% of cases the diagnosis remained unchanged and no proposal to replace the medical safety measure was made;
- In a 12% case, the diagnosis was changed due to the favorable evolution of the symptomatology and the preliminary measures that were taken to propose a replacement of the safety measures but this had not yet been done;
- In a percentage of 22.7% of cases, meeting all of the criteria mentioned above, we made the proposal to replace the medical safety measures of Art. 114 C.C. to Art. 113 C.C.
- In a percentage of 0.3% cases, it was proposed to cease medical safety measures.

Another aspect of our study is very important: how has the proposal to replace the medical safety measures under Art. 114 C.C. with those provided by Art. 113 C.C. 80% of this proposal was appropriated, and if the proposal was not met, the criteria (which we were interested in) was the following: if he were healthy and had a discernment of the antisocial deed committed he would have received an X deprivation of liberty. We compared the length of time the patient stayed in the hospital with this X period and if it was lower, the proposal was not appropriated. Of course, not having the necessary legal training, we can not comment on these issues.

At the end of this paper we propose the elaboration of methodological norms for making this particular genre of psycho-legal forensic expertise by the Superior Council of Forensic Medicine.

A1.6. The assessment of the social danger represented by the mentally ill patients falling under article 110 of the Criminal Code (National Congress of Forensic Medicine, 2014, Vol. of summaries, ISSN – 2343 – 7529, ISSN – L - 2343 – 7529)

The New Criminal Code replaces Article 114 with Article 110 related to the mandatory admission of the mentally ill offender who is lacking discernment. Article 110 of the New Criminal Code is more correct from the medical point of view as it replaces the term "healing" with the term "recovery" or with "getting an improvement" of symptoms and especially since it introduces the phrase "removing the state of danger". It is the task of the FPE (Forensic psychiatric expertise) to determine if a mentally ill patient suffering from a psychosis, admitted with Criminal Code 110 still has a dangerous potential and therefore if the replacement of the medical safety measure provided by Article 110 Criminal Code with the medial safety measure provided by Article 109 Criminal Code - to compel treatment - can be justified.

Material and method: We applied psychological tests suggesting the danger of a mentally ill patient hospitalized at the Neuropsychiatric and Safety Measures Hospital from Stei. The most used test was HCR – 20 which was applied to a total number of 85 patients.

Results: From the total of 85 patients to which it was applied HCR – 20.50 patients were found having a low level of social danger.

Conclusions: Developing the result obtained and based on three evaluation criteria: medical (symptoms relief), social (family support) and legal (the gravity of the act) we have proposed the replacement of the medical safety measures for a number of 40 patients from a total of 85 patients.


The Stei Security Psychiatric Hospital is one of the four hospitals in the country where psychiatric ill persons who have committed criminal offenses have been admitted but who have no discernment and have been legally declared irresponsible.
Lack of discernment attracts irresponsibility and the irresponsible offender cannot be punished under the Penal Code but must also be subject to a medical safety measure also provided by the Criminal Code (C.C.):
- Article 109 of the C.C. obligates the mentally ill to treatment which is monitored through the psychiatric offices and pursued by the policeman who is in charge of the case.
- Article 110 C.C. involves the mandatory admission of the mentally ill offender to one of the 4 psychiatric hospitals mentioned above.

There is a territorialisation of the counties towards these 4 hospitals.

There are 13 counties in Ștei Hospital, these being geographically closest to this location.

The psychological offender who is covered by the medical safety measure provided by art. 110 C.C. arrives in the hospital with a court sentence and will be able to leave the hospital also on the basis of a court order. (Butoi T., 2003)

As a fundamental test that proves irresponsibility is lack of discernment in forensic forensic expertise (FE). It is done to psychiatric patients before hospitalization and must answer three questions (Dragomirescu V. T., Hanganu O., Prelipceanu D, 1990):
- If the person has a mental illness or not and if it has what is its name;
- If the illness has affected in any way the discernment reported at the time of the act, to state whether he had discernment or discernment was absent;
- If a medical safety measure is required in one of the two possibilities mentioned above.

The irresponsible psychosocial patient arrives at Ștei Hospital and here, at first, the treatment for the psychic affection that he presents is done.

Most often, but not always, the evolution of the psychiatric condition under treatment is favourable. (Bogdan F., 1973)

When the patient was also an alcohol consumer the fact that in the hospital he can no longer continue this vice reinforces the favourable evolution of the disease under treatment. (Enăchescu C., 1979; Dragomirescu V. T., 1976)

The treatment of mental illness is expensive but effective today. (Belis V., 1995)

**How long will the patient stay in Stei Hospital and what will he do during hospitalization?**

It is a question with many answers, which ultimately depends on the evolution of the disease and a multitude of factors, social foremost (support and family situation, economic, legal situation, etc.). (Brînzei P. et al., 1970)

Sometimes the mental illness remains in the hospital. This is undesirable and can be considered a failure of both treatment and socio-economic conditions that could not allow the patient to re-enter society.

Sometimes the evolution of the mental illness is good and the patient stays in the hospital for at least 6 months or a few years.

In most patients the treatment is effective, as we have shown, the doses of medication are getting smaller and sometimes the treatment is no longer required.

When the patient is in a situation like the one described above, he no longer has the symptoms of any psychiatric condition and a new psycho-legal forensic expertise can be performed and if it is considered that the patient's social danger is low or non-existent it is recommended to replace the medical safety measures provided by Art. 110 C.C. with those provided by Art. 109 C.C. (mandatory treatment) or even suspension of medical safety measures.

We recall from the above that the psychiatric patient at Ștei Hospital can remain hospitalized for months, years or even for all of his life.

In addition to, or alternatively to, drug therapy, Stei Hospital successfully implements various methods in order to help improve the psychiatric illnesses of the patient.

We present some of them namely **spiritual and psychological counselling**.

The number of patients in the hospital is on average 260 of which approx. 200 men and 60 women.
The hospital has a chapel, where only regular patients want to attend meetings with priests or preachers of different confessions.

The hospital has employed an Orthodox priest who fulfils his specific duties daily.

Besides the church activities where patients attend, the priest has individual or group discussions with patients.

Besides the orthodox priest who is a volunteer, a Catholic priest and preachers from the neo-protestant cults (Baptists and Pentecostals) come weekly to the hospital.

Their meetings with patients take place both in the chapel arranged in the hospital and in the hospital club.

In the chapel there is a vast religious literature where patients have free access.

The number of patients attending these religious meetings is variable but without being accurately monitored we appreciate it at approx. 60% of sick patients.

As a specialty we recall that the medical staff in the hospital management encourages formation of groups of meditation and prayer initiated by the patients themselves.

For example, there are situations when a patient with good religious culture gathers around him 20 patients, reads verses from the Bible and comments them.

As a therapeutic effect it is noted that patients who follow any form of religious activity or counselling have a better clinical outlook, alleviating or even disappearing, in particular violent manifestations.

In fact, all these actions make patients socialize with each other and with people outside the hospital, which is a consistent step towards social reinsertion when they are discharged from the hospital.

The Orthodox and Catholic priests offer a special benefit for the sick, they have meetings with the sick people because they visit the sick on Saturday and Sunday. These links are beneficial to a good family reintegration of the patient after discharge.

Religious counselling, as well as any other form of religious activity or manifestation in the hospital, should be followed especially by midwives (nurses) to capture possible pathological issues. It is primarily about the emergence or intensification of a possible mystic delusion. (Bogdan F., 1973)

When this happens the role of talking individually with the patient to clarify the religious aspect belongs to the priest, and the psychiatrist has the role of modulating or even changing the treatment.

**Psychological counselling** is done at Stei Hospital through two committed psychologists.

They perform, first of all, periodic psychological examinations that are found in the patient's observation sheet (OS) and are very relevant to assess the course of the disease, respectively to quantify the patient's risk.

In addition to these psychological examinations, the two psychologists have in the program individual discussions within a group of patients, which can be used to solve conflicts that are inevitable, both among the patients and between the patients and the medical staff.

Relationships between the patient and his family often seem irreparably compromises, but psychological counselling can find ways to improve and even neutralize these intra-family dysfunctions.

In conclusion, we can say that in Psychiatric Hospital and Medical Safety Measures in Ştei, where psychiatric patients with serious illnesses who have committed antisocial deeds are treated, the treatment is complex, effective and obviously favoured by the spiritual and psychological counselling of the patients.

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**A1.8. "Case file" - Key element in conducting psycho-legal expertise on documents**

The number of forensic psychiatric expertise on paper has been increasing exponentially in recent years. If before 1990 we had one or two forensic psychiatric expertise a year, this type of expertises had become more and more often and it is equally sensitive to the number of expertises on civil cases of people that are alive.

In fact, the number of psycho-legal forensic expertise other than criminal cases is more and more numerous, the explanation being complex: on one hand, the population is much more emancipated in protecting testimony data that people, usually of age, do and on the other hand private property often consisting of very large assets is also protected by medical records.

All forensic physicians, heads of psychiatric forensic expertise committees, admit that this kind of expertise is the most difficult, and the findings of expertises are often criticized by much subjectivism and are not based on certain medical realities.

We shall present what are the difficulties of developing this kind of expertise and what are the methods we use to try to give scientific value to the findings in expertise so that it becomes a solid test in court:

- A first point is that sometimes the address for the requested expertise is accompanied only by a few medical records and possibly a copy of the act at issue. In this first aspect, it is always necessary to respond in one way: for carrying out the expertise it is necessary for the entire case file not just for the medical documents existing in the file.

- When we have the case file available, the first step is to select the medical records between the often-numbered tabs of the file. On this occasion, the first problem arises: medical files are very few, irrelevant, and the photocopying is in the worst quality or the writing is illegible. It is obvious that we need medical records to show that if at the time of drafting the notarial act (now in dispute) the person had psychic competence or not. What do we find in the file instead? - a hospital exit ticket from the doctor or oncologist, for example, a photocopy after a O.P. clinic since the last hospitalization, a retirement decision or a handicapped certificate, etc. Based on these acts only, it is illusory that we can make valid conclusions. First of all, we need a correspondence with the court to provide photocopies of all the medical records that the patient has died, meaning: Family consulting card, photocopy after OP of recent years, prescriptions, medical certificates and medical letters. There are situations when, despite the efforts we make, the attempt to obtain medical documents remains without the simple reason that the person concerned has not been admitted to the hospital or has not presented himself to the family doctor or he did not visit him at home. In this situation, we must refer to the evidence from the medical indirectly file, which means: documents that show how the last days, weeks or months of the person's life were, how they showed up, what they did, what they spoke. These data can be obtained, first of all, from the witness statements in the file. At this time of the investigation of the case, we can again initiate a correspondence with the court, in the sense of re-examining some witnesses who are asked questions suggested by the members of the psychiatric forensic expertise commission. Equally well, some witnesses may even be summoned to the committee of expertise to clarify the possible disorder that the person concerned presents at that date.

- Another approach that the commission can do is to request a social investigation into the environment in the deceased's family, the objectives of the investigation being also suggested by the members of the psychiatric forensic examination committee.

- In the case of an elderly person, where the interval between the drafting and the signing of the notarial deed and the death is very short (a few days), the forensic doctor, a member of the expert commission, has the role that, based on the knowledge in relation to tanatology - the stages of death - state whether the person in question could be able to understand the content and, in particular, the consequences of the act he has drafted and signed.
The study of the notarial act itself is also very important although he can not bring medical data about the person who has drawn it but can offer guidance, for example: if the act is not signed and the notary states that "he could not sign on the grounds of illness" or "did not sign being paralyzed" or "did not sign because he does not see" we can get an opinion on the biological state of the patient. The content as such of the act is also important to know and study. Some documents are very simple, written with very simple, easy to understand terminology. It is, therefore, suspected that they could easily be understood by the person who signed the act. Sometimes, however, the act is long, with very complex terms, with clauses, so hard to understand that it is a problem, even for the members of the committee when they read it. We can think in this situation that the one who signed it has had difficulty in understanding all the contents of the document.

From a practical point of view, the method we use in drawing up these expertise is the following: the forensic doctor, the head of the expert commission, ensures from the beginning, before presenting the file to the psychiatrists, that it includes all the medical and non-medical documents that may help in drawing up the expertise. Then he writes, in chronological order, the following points:

1. the manner and date when the act at issue was drawn up;
2. the age of the person who signed the act at the time of writing;
3. the date of death of the person, with an explicit mention of the time elapsing between the time when the act was drawn up and death;
4. enumeration of the medical records in the file, in chronological order, from the oldest to the newest;
5. listing all the diagnoses presented by the person;
6. specification of the psychiatric disorders presented by the patient as well as of his behavioural disorders, indication of the alcohol consumption, medication, etc.;
7. when the act was drafted in the hospital, the evolution and treatment of those days;
8. specify the type and content of the act in dispute, focusing on signature, difficulty, etc.
9. the explanation of the cause and the type of death - the diagnosis of death.

When all these things are known and noted, they must be brought to the attention of the other members of the expert committee so that, together, we try to reconstitute what constitutes the essence of the expertise: what was the mental state of the person when he signed the notarial act or the act testimonial.

All. Research and contributions in the field of forensic traumatology

The traumatological aspects of intra-family violence have been a predominant field of my scientific research so I have published several articles on this topic.

Another area of research was that of road traffic accidents. However, a constant concern in the field of violence was also to identify and prove the factors that favour domestic violence or other forms of violence.

I will continue to present some of my studies in the field of forensic traumatology.


Introduction

The case we are going to present has some peculiarities regarding the deed itself and the personal characteristics of the perpetrator. It is differentiated from the usual homicides, in which, the author of the crime ends the life of the victim using "classical" means like knife, bats or other hard objects such as fists and legs (Beliş V., 1995; Reddy Narayan K.S., 2000).
Case report

Crime history: a young woman of 31 years is the victim, is married for the second time with a man of the same age; they have together 2 children. The woman had 2 other children from her previous marriage. The author of the crime is the woman's husband; he has made it only through 8-th grade in school, he has no criminal record and no psychiatric history. He is appreciated by his colleagues and he is a hard working person. He was never involved in family conflicts that were followed by violence; he has never hit his wife or her parents. He was constantly preoccupied with educating and raising his 4 children, maybe even more than their own mother, whom was a woman without major vices, but she would spend more money than they would make; she does not have a psychiatric history either. She decides to start working in Italy where she was living for 7 months before the event. She returns home on December 23rd, 2007 to spend Christmas with the family, and from the moment she arrived, while they were in her parents' house, they start arguing about the family's future. The husband insists to his wife not to go back to Italy but she told him she would go back right after the New Year because she has work engagements. While she was gone the woman sent home 7000 euros, clothes and food. The husband insists that she shouldn't go back, and then the woman tells him that she has a boyfriend there and she is asking for divorce. They debates last for a few hours having an insignificant quantity of alcohol, a shot of distilled drink, possibly whisky. Being tired after her trip home, the woman decides to get ready for bed and falls asleep next to her husband, whom during the night, possibly around 1 or 2 o'clock wakes up. From that point on the man starts putting together an electrical installation using a computer cord. He manages to attach a wire to the woman's right wrist on a gold bracelet, and he ties the other wire directly to left wrist. He then kisses his wife on the forehead and then plugs the cord.

He notices the woman's convulsions and leaves the room. He gets dressed and in the morning he hitch-hikes a car and heads for Oradea. On the way, using his cell phone, calls his father in law telling him that his daughter is sick and he should go look for her. He also calls his brother from Oradea that waits for him and together they go to the Police Station where he testifies. A few strange aspects must be mentioned: after plugging in the cord there was no short circuit, so that the electric circuit through the woman's body causes some thermic phenomena; at the time of death the woman's alcohol level was zero; the electric marks on the wrists were the same as the thermic changes of the forearms, arms and thorax. The woman's father, before touching the body he stopped the power by removing the fuse.

Psychiatric evaluation: During the perpetrator's medico-legal psychiatrical evaluation we observed the following: the subject had no psychiatric records, he was auto oriented temporal and alapsychic, initially he presented difficulties to concentrate which affect the dialogue, but after a while he remembers in detail how it all happened, he presents attention and affection fluctuations, he denies changes regarding perception area, intellectual potential medium-weak, introvert personality with isolation tendencies, difficulties to relate claiming a conflictual family environment.

A few idea belonging to the subject of the evaluation: "I always wanted the good of my family, I strived so we could have a good life, I had debts of over 300 million lei and I worked so I could pay."); "I initially agreed to my wife's departure to Italy so that she could make money, but I don't think it was good for the children not to have a mother for such a long time"; "I worked all the time, I was the slave of the family and I did everything my wife told me to do", "I never answered back to her reproaches, nor to her parents", "I loved her and I did not want to divorce". Asked about the children he said he thought about them and they will be well taken care of by the grandparents.

The psychological exam shows: the intellectual level cannot be determined because of the patient's state, he has concentration difficulties, attentional fluctuations, he denies changes in the thinking perception area, introvert personality with reactive depression tendencies, questionnaire S100 at the immaturity levels, liability, paranoia, psychopathy does not reveal emphasized features. It is relevant (T. Koch) the expansion of the "I", effort to censor, adaptation difficulties,
recent or old affective conflicts, criticism, aggression, offensive attitude, pungent spirit, instinct, tendencies developed unconsciously, an explosive attitude, insecurity, superficiality, impulsive, violent reactions, easy to influence, incapacity of decision, regression, behavior disorders.

The electroencephalographic scan did not show graphic elements with pathological meaning.

Conclusions: It is concluded that the patient does not suffer from any mental illness, he kept his discernment when he committed the crime; there no medical safety measures needed.

We are dealing with a homicide that has an author that does not have a mental illness, but re-analyzing the way he committed the crime and knowing the reasons that led to this when can make the following psychopathological observations:

He is an adult, young person that does not cross the general permitted rules; no psychological record, nor family history; he comes from a normal family from a rural environment; his academic evolution is medium, he performed his military duty; no criminal record. It is to be mentioned that even though the family was some what wealthy, the patient only graduated 8 grades, which helps us assume that he was not very well endowed intellectually to make him desire the social status of small craftsman.

More emphasized features of his personality could be part of the psychological asthenia personality, characterized by constant self dissatisfaction, asthenia, seclusion and painful introspection, insecurity is to be taken in consideration, susceptibility, and some what of a psychological rigidity. Also it is obvious an affective resonance quite reduced in intensity and size.

We must summarize the circumstances that led to this deed: a wife that was married before, that liked to spend and not very caring for her family (husband and her parents), with many time consuming friendships and with expensive phone conversations with third parties unknown to her husband. Returning from abroad also meant admitting the existence of a new partner and divorce right after arriving. Such an "honest" and direct attitude lacking in consideration and sensitivity equals a psycho-trauma in every circumstance.

It must be said that to the psychological asthenia personality that the patient has, it is added some familiar and community vulnerability factors specific for the origin environment; the influence of the parents, the comments of the in-laws and friends, the unwritten laws of the community regarding the family, faithfulness, morality and honor, love etc. to an emotional disturbed background in its cognitive content.

In a very abrupt but truthful way we could quote the laws of Murphy: "in stressful situations most people choose from a variety of actions, the worse". (Beliș V., 1998)


Intra-family violence is a phenomenon with profound negative implications for the individual as well as for the family and society, with a much greater spread than was thought of without taking into account territorial, social or economic barriers. (Dermengiu D., 2002) Domestic violence represents any act of physical or emotional injuries that takes place between members of a family. (Astarastoae V. et all, 1993, Dermengiu D., 2001) It is a violent action carried out by one of its members having a marital, parental or care roles, to others with mutual roles. Especially women, it is considered to be one of the most serious forms of violation of women's rights and one of the major causes of family relations. (Belis V., 1990)

On a daily basis, a large number of women are victims of physical, mental or sexual aggression in their homes.

The problem of domestic violence has recently come to the attention of public opinion, as a result of the pressure exerted by women's organizations (1993 - Vienna - World Human Rights Conference) - declared the need to protect women in both public and private life 1994 - Cairo - International Conference on Population and Development - the issue of equality between women and men on sexual and reproductive life was raised).
In Romania, domestic violence is a widespread phenomenon, more widespread than surveys, for the mere fact that many of these acts of violence are not reported to the police, and the victims, most women, do not even appear for a forensic consultation. Thus, although there is a continuous increase in the number of cases of domestic violence, this phenomenon remains in most cases a family secret. (Cocora L., 2003)

From the exposed ones it follows that domestic violence is mainly exercised against women. Domestic violence can be displayed through physical, psychological and sexual aggression. (Mihalache G., Buhas C., 2007)

**Physical violence** – it usually is recurrent and it scales in frequency and severity.
- pushing or thrusting the victim;
- hitting the victim with different hard objects (fist, palm, hard object)
- harming the victim with a weapon;
- immobilizing, tying or detaining the victim;
- abandoning the victim in a dangerous area;

**Emotional or psychological violence** – it can precede or accompany physical violence.
- harm threatening;
- physical or social isolation of the victim;
- extreme jealousy or possession;
- confinement of resources for fundamental needs;
- intimidating, lowering and humiliating the victim;
- false accusations, blaming the victim for everything.

**Sexual violence** – represents the most difficult part of domestic violence abuse against women because it is hard to prove.
- any type of forced sex or sexual degradation;
- any pursuit of making the victim having sexual contacts against their will;
- continuing sexual activity when the victim is not fully aware, does not give consent or is afraid to give a negative response;
- forcing the victim to have sexual contacts without safety against pregnancy or sexual diseases.

According to a statistical study conducted by the Department of Labour and Social Solidarity and Family in Bihor County, as factors favouring domestic violence, we mention:

**Patriarchal and traditional thinking regarding gender relations and their hierarchy:**
Romanians have a patriarchal and traditional thinking about the relationship between the sexes and the hierarchy between them.

So:
- 58% of Romanians believe that it is the duty of the woman to take care of the house and 65% of them believe that it is the duty of men to bring money into the house;
- 39% of Romanians consider that their family is preferable lead by man;
- the woman is perceived by 21% of the Romanians as a property of the man and 5% of them think that the woman must be beaten sometimes and that is because she "knows why";

It follows that femininity is associated with obedience, docility, submission.

This distribution of roles by gender is the backdrop of violence against women, giving the aggressor justifications and pretexts and the victim's guilt.

In Romania, women in patriarchal families are more at risk of being assaulted.

**A poor life style associated with alcoholism:**
In Romania, family violence mostly affects poor families in both rural and urban areas. Low incomes, unemployment, aggressive social and family environment, lack of existence means
for women and chronic alcohol abuse in men are factors that encourage the rise of the phenomenon.

So:
- 38% cases of women who report of physical violence in the family come from very poor families who do not have income to provide the necessary support;
- 22% of the victims come from families where someone has recently been unemployed;
- victims’ income is generally low - 29% of the victims fall into the low income category, 25% in the middle income category, 20% do not have their own source of income and 15% have very low incomes;

**The educational situation of the victims:**
- 29% of the victims graduated from high school;
- 19% of the victims have graduated from a professional school;
- 16% of the victims started high school but did not finish it;

It is certified that women that are victims of domestic violence are persons that have a lower educational level.

**The situation of the aggressors:**
- Age: 39% - Age 36-45 years old, 24% - Age 46-55 years and 23% - Age 26-35 years old.
- Occupation: 54% - skilled workers, 20% - unskilled workers, 13% - civil workers.

Starting from this study in the county of Bihor regarding the factors favouring domestic violence, we carried out a statistical study on women, victims of domestic violence who presented themselves for consultation in Bihor - Oradea County Forensic Medicine Service. We have obtained the following results:

1. The percentage of reports made on alive aggressed persons, out of the reports total on alive persons performed by MLD Bihor between 2004 – 2006.

<table>
<thead>
<tr>
<th>Period of the study</th>
<th>Reports Total</th>
<th>Aggression cases</th>
<th>At the persons request</th>
<th>Requested by the penal action authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004 -2006</td>
<td>8976</td>
<td>3439</td>
<td>3160</td>
<td>279</td>
</tr>
<tr>
<td>Percentage</td>
<td>100%</td>
<td>38,31%</td>
<td>35,20%</td>
<td>3,10%</td>
</tr>
</tbody>
</table>

2. Aggression cases distributed by genders.

<table>
<thead>
<tr>
<th>Year</th>
<th>Gender</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2004-2006</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>672</td>
<td>612</td>
<td>754</td>
<td>2038</td>
<td>59,26%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>429</td>
<td>440</td>
<td>532</td>
<td>1401</td>
<td>40,73%</td>
</tr>
</tbody>
</table>

Out of the 1401 women that were victims of a certain aggression, that presented themselves to MLD Bihor for a medico-legal document, 851 were victims of domestic violence.

3. Distribution of the cases based on women’s age that were victims of domestic violence.

<table>
<thead>
<tr>
<th>Year Age</th>
<th>2004 - 2006</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 - 30</td>
<td>263</td>
<td>30,46 %</td>
</tr>
<tr>
<td>31 - 40</td>
<td>174</td>
<td>19,99 %</td>
</tr>
<tr>
<td>41 - 50</td>
<td>154</td>
<td>17,58 %</td>
</tr>
<tr>
<td>51 – 60</td>
<td>125</td>
<td>14,27 %</td>
</tr>
</tbody>
</table>
It is observed that most women that are victims of domestic violence are aged between 21 – 40 years.

4. Distribution of the cases based on women’s background that were victims of domestic violence.

Table 4

<table>
<thead>
<tr>
<th>Year</th>
<th>2004 - 2006</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>Urban</td>
<td>480</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>367</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Distribution of the cases based on the mechanism of generating the lesions.

Table 5

<table>
<thead>
<tr>
<th>Generating mechanism</th>
<th>Number of cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activ hit with a hard object</td>
<td>569</td>
<td>66.90%</td>
</tr>
<tr>
<td>Activ hit followed by a fall</td>
<td>90</td>
<td>10.53%</td>
</tr>
<tr>
<td>Hardware hits</td>
<td>53</td>
<td>6.20%</td>
</tr>
<tr>
<td>Other mechanisms (scratches, constrictions, bites)</td>
<td>139</td>
<td>16.36%</td>
</tr>
</tbody>
</table>

6. Distribution of the cases based on the lesions gravity given by the number of medical care days.

Table 6

<table>
<thead>
<tr>
<th>Judicial qualification of aggression lesions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art.180 C.P.</td>
<td>92.96%</td>
</tr>
<tr>
<td>Art.181 C.P.</td>
<td>6.51%</td>
</tr>
<tr>
<td>Art.182 C.P.</td>
<td>0.52%</td>
</tr>
</tbody>
</table>

Conclusions of the statistic study:
1. Out of the 8976 total number of medico-legal reports performed between 2008 – 2010 by MLD Bihor – Oradea, 3439 of the cases were consequences of aggression.
2. 40.73% of the aggressed victims on whom the study was done were females.
3. Out of 1401 women that came to MLD Bihor – Oradea because of aggression, 851 were victims of domestic violence.
4. During the time of the study, most women that were aggressed in their family derived from urban area.
5. Most of the lesions were produced by an activ hit with a hard object (like a palm, fist, leg) and were needed under 20 medical care days, the act being framed in art. 181 C.C, which is less relevant since most women claimed at the examination that they would use the forensic document as evidence in the divorce process.

Conclusions
- According to the statistical survey, domestic violence against women is a frequent and increasing phenomenon from year to year, although, as mentioned at the beginning, the real number of victims remains unknown.
- Among the determining factors of this type of violence we mention: the unequal distribution of family income, the supremacy of the man and his exclusive possession of family goods, the permanent conflicts between spouses and, last but not least, the organization of the patriarchal model of the family.
So far, there is not much data on domestic violence against women in Romania for reasons already known: fear, the shame of the victims to speak of the subject, the sense of guilt.

Official statistics show a large number of casualties, although it underestimates the number of cases of domestic violence against women due to the reluctance of victims to report.

It is necessary to raise the awareness of the population about the existence of the domestic violence phenomenon, but also to popularize the concrete measures by which this phenomenon can be prevented and combated.

Motions
- Establishment at the local level of a counseling center for victims of domestic violence.
- Encourage the development of non-violent attitudes and behaviours in order to achieve the goal of "zero tolerance" towards domestic violence.

AII.3. Violence: A Family Dissolution Factor

Although domestic violence is an old social phenomenon it has been publicly presented in the United States and Western Europe as a serious problem of society in the last three decades of the twentieth century. (Okin Susan Moller, 1989).

In Romania, before 1989, there was no official statistics or scientific research on domestic violence. After 1990, small studies have been carried out but they have not provided an overview of this type of violence. In 1995, Minnesota Advocates for Human Rights, Lifting the Last Curtain, found domestic violence to be a frequent problem in Romania. In this report, the Romanian state appears to be failing to meet its obligations to protect women from domestic violence and the proper non-prosecution of violent husbands. It is proposed to implement and develop complex programs aimed at preventing violence against women.

In 2012, statistics showed that 75%-80% of women in Romania were abused in domestic (verbal, psychological, physical, sexual) space. However, the police intervened only to settle the conflict and to apply fines to the aggressor. Under these circumstances in Romania women prefer to continue to live with their violent husband rather than to seek help from state institutions. It is also noted that acts of domestic violence are considered "couple's problems" and regarded as tolerable behaviours. (Genre Barometer, 2000)

Legislative framework on domestic violence

In Romania, the legal framework governing domestic violence is represented by the provisions of the Romanian Constitution and those of Law 217/2003 on combating domestic violence. Other legal aspects on domestic violence are found in the Penal Code, Law 211/2004 on measures that ensure the protection of victims of crime, Law 202/2002 on equal opportunities for women and men, and Law 272/2004 on the protection and Promoting the rights of child.

The new Penal Code, which came into practice in 2014, provides in Article 199 that "If the deeds referred to in Articles 188, 189 and 193-195 are committed against a member of the family, the special maximum of the penalty provided by Law increases with a quarter. " (These crimes refer to Article 188 Murder, Art. 189 Criminal Offense, Art. 193 The Loving or Other Violence, Article 194 Corruptive and Article 195 The Killing or Damage Causing Death). Another important law is Art. 197 Relational treatments applied to the minor.

Extra-penal legislation - Law 217/2003 on the prevention and combating of domestic violence, republished in 2014, offers an extrapolated definition and approach to domestic violence; The victim may also request a protection order.

In the New Penal Code - Special Part, Title VIII, Chap. II, art. 376-380 includes all offenses against the family. These offenses are as follows:
- bigamy;
- incest;
- family abandonment;
- non-compliance with the custodial measures;
- preventing access to compulsory general education.

**Definition of domestic violence**

Domestic violence is defined in Romanian legislation through Law 217/2003 on the prevention and combating of domestic violence.

The definition is: "Family violence is any physical or verbal act committed intentionally by a family member against another member of the same family that causes physical, psychological, sexual or material harm. In the sense of the law, a family member means a spouse, close relative, and persons who have established relationships similar to those of the spouses or between parents and the child as evidenced by the social investigation."

It also constitutes domestic violence preventing women from exercising their fundamental rights and freedoms."

The Council of Europe Convention on the Prevention of and Fight against Violence Against Women and Domestic Violence (also called the Istanbul Convention) has the following definition: "domestic violence" shall mean all acts of physical, sexual, psychological or economic violence occurring in the family or in domestic units or between former or current spouses or partners, regardless of whether the aggressor divides or shared the same domicile with the victim.

It follows from these definitions that "domestic violence" is an ample concept that includes both domestic violence - understood as any act of psychic or physical violence - but also sexual, economic or social violence. Family violence can occur between both spouses or concubines - as well as children, the elderly or other relatives, including the former spouse. (Martin Amy J., et al., 1999) It is manifested as: physical violence - it is usually recurrent and escalates both in frequency and severity, emotional or psychological violence - may precede or accompany physical violence or sexual violence - The more difficult aspect of abuse of domestic violence for women. (Mihalache G., Buhas C., 2007)

The factors favouring domestic violence in Romania are: patriarchal and traditional thinking about gender relations and their hierarchy; Low living standards associated with alcoholism; The educational situation of the victims - are mostly people with a low educational level; The situation of aggressors - most of the unskilled workers, aged 36-45. (Buhas C., Mihalache G., Radu C., 2007)

A particular aspect, not to be neglected is domestic violence on the child, a phenomenon that will have particular repercussions over time. The child frustrated by affectivity in the family will develop an authoritarian and cruel personality, depreciation of others. In adulthood, this personality will be the origin of an anomic personality characterized by affective indifference, instability, egocentrism and impulsivity. In this way, the danger of affective family deficiency (as in the case of the unwanted child, the one resulting from extra-conjugal relationships or conflicting relationships) becomes social. (Belis V, 1995)

How, the most frequent cause of the emotional deficiency is intra-family violence, we witness a vicious circle in which violence inevitably generates violence. A child lacking affection, a victim of domestic violence, will become the promoter of future intra-family violence and even of social violence.

Is this phenomenon a fatality? Research shows that 77% of the authors of intra-familial violence have been victims of childhood abuse.

Generally, the best predictor of domestic violence is the existence of an incident that occurred prior to the moment when the risk of domestic violence was discussed. Indifferent of the form of violence, its appearance in family relationships is a breach that will gradually
embody widespread, more varied and more frequent forms and manifestations. Although innocent a remark like "I do not like how you've arranged your hair" or "I do not like how you dressed," it will bring with you, in time, more and more dramatic consequences. (Eurobarometer 51.0, 1999)

After a few years, incidents may be more and more serious and the phase of remorse, insistence on forgiveness and reconciliation, to total absenteeism, which can lead in many cases to the dissolution of the respective family.

**Conclusion** - In any way, the so-called family model must be defeated, the situation where children see their father aggressing their mother or other family members and when they are adults they repeat or even amplify this type of behaviour.


Some traffic accidents, when the driver and the passengers wear seat belts, result in minor post-traumatic lesions, especially when the deceleration is of low intensity. Traumatic marks such as echymosis can be found on the neck and thoracic area due to seatbelt compression. Also excoriations or possible lesions can be identified on the areas where the body has direct contact with the hard parts of the car’s interior. Most often the victims of such traffic accidents do not have internal lesions, but the paraclinical investigations, such as ultrasound, computed tomography (CT), magnetic resonance imaging (MRI) are useful, especially when the patient has subjective complaints of pain in different parts of the body. Shortly after a traffic accident, the patient sometimes presents symptoms of different sufferings. This happens in cases of car accident victims who immediately following the event, state that they have no lesions, they claim feel well etc., and as a result of their statements the accident is reported as a minor collision with no human victims. The seatbelt, in some cases, may be exactly what produces the lesions. We present further such a traffic event, with an unexpected neurological and medico-legal evolution.

**Case presentation**

56 year-old male, with no significant medical history, while driving his vehicle at night, brakes suddenly at an intersection to avoid a collision with another vehicle. The collision could not be avoided, but it resulted in a low intensity impact. The two drivers decided to settle the accident problem amicably as none of them showed any obvious lesions, and the material damage was insignificant. The following morning, the 56 years old driver involved in the accident, woke up with deglutition and motility disturbances, tongue edema and dysarthria. He arrives at the hospital, and he is admitted into the emergency room where he is examined by an ENT doctor. The patient does not correlate his condition with the accident, nor does he mention to the doctor that he was involved in a car accident in the hours prior to his arrival at the emergency room. He is diagnosed with “Quincke Edema” and he is treated with antihistamines and analgesics. The symptoms persist and the patient has an unfavorable evolution. He is examined neurologically. A cerebral MRI is recommended and performed. The result shows no pathological changes. The neurologist suspects “Motor Neuron Disease” and recommends an electrophysiological with electromyography examination and a neurography. Even after performing these investigations the patient makes no connection with the suffered trauma, therefore he still does not mention to the attending physician the traffic accident he was involved in. Three days later, that is 11 days after the accident, the patient presents laterocervical pain on the left side, dysarthria, deglutition disturbances, edema and motility disorders at the level of the tongue. The neurological examination reveals tongue edema, tongue paralysis, the tongue being deviated to the right side of the oral cavity and to the left at protrusion. The reinterpretation of the MRI shows the dissection of the left internal carotid artery in the pharyngeal segment, before the internal carotid artery enters the carotid canal. The neurologist brings up the possibility of trauma and only then the patient mentions the traffic accident he was involved in. The paraclinical investigations are repeated, CT scan, an MRI, computed tomography angiography
(CTA), brain and cervical magnetic resonance angiography (MRA) are additionally performed, and the suspicion of arterial dissection is confirmed. It is noticed a second degree subadventitial dissection in the pharyngeal segment of the internal carotid artery (ICA). The Doppler examination result of the cervical-cerebral vessels is within normal limits. The patient is started on anticoagulant treatment with Heparin, and vitamin K antagonists. The patient’s evolution is favorable. Three weeks from the initial appearance of the symptoms the patient’s deglutition disturbance improves, the pain stops, the tongue edema subsides. There is a significant improvement in the tongue motility, but a light hypoglossal paralysis persists on the left side, and a light atrophy installs on the left half of the tongue.

Meanwhile the patient requested a medico-legal certificate. On the occasion of the examination, the only sign of a traumatic lesion was a very pale yellow-greenish linear bruise, located diagonally on the left lateral side of the neck, pointing towards the presternal region, approximately 12 cm long and 4 cm wide. The patient accused pain in this area and presented the entire neurological symptoms described previously. The events chronology and the diagnosis of the post-traumatic complication resulted from the study of the medical documents presented on the occasion of the medico-legal examination. The conclusions of the medico-legal certificate showed that the lesions were produced by a deceleration mechanism, through seat belt compression; the patient received 35 - 40 days of medical care.

**Discussions**

The dissection of the cervical arteries (DCA) is a relatively frequent condition. The rupture of the arterial wall happens frequently at the level of the tunica media and results in bleeding inside the arterial wall. The intramural hematoma spreads transversally to the intima or to the adventitia. The increase in volume of the intramural hematoma causes compression of the vascular lumen. (Caplan R. L., 2008)

The extension of the intramural hematoma towards the intima can cause its rupture, the appearance of the intimal fold, and of the double lumen which determines the occlusion/stenosis of that vessel. The lesion of the intima leads to the release of the tissue factors which cause platelet activation and activation of the coagulation cascade, making it possible for local thrombi to be formed, that could either cause microemboli downstream or vascular occlusion. All these mechanisms cause vascular cerebral damage and transient ischemic attacks (TIA) or cerebrovascular accidents (CVA). Sometimes the arterial dissection can even begin at the level of the intima. (Caplan R. L., 2008, Blum A. C. et al., 2015)

The extension of the hematoma towards the adventitia can cause a large size intramural hematoma which can lead to compressions of the adjacent structures, can determine the formation of some pseudoaneurysms or even the rupture of the vessel and its bleeding in the adjacent tissues, or in case of intracerebral vessels bleeding in the subarachnoid space. (Caplan R. L., 2008, Blum A. C. et al., 2015)

The hematoma can also spread longitudinally along the vessel, proximally and/or distally to the initial lesion location, and an extended dissection on variable lengths of the vessel can occur. (Caplan R. L., 2008; Blum A. C. et al., 2015; Baumagartner R. W. et al., 2005)

In the case of the Internal Carotid Artery (ICA), the dissection happens most frequently at the level of the pharyngeal segment, where the vessel is not tied to other structures, the artery being mobile. (Caplan R. L., 2008; Blum A. C. et al., 2015; Baumagartner R. W. et al., 2005)

The cervical arteries dissection causes are controversial. There is the sudden dissection and the post-trauma dissection. (Caplan R. L., 2008; Blum A. C. et al., 2015; Baumagartner R. W. et al., 2005) Sometimes, the patients present connective tissue abnormalities, which increase the risk of dissection: Marfan syndrome, Ehlers-Danlos syndrome, fibromuscular dysplasia. (Schievink W. I. et al., 1988; Brandt T. et al., 1988) In familial cases, with recurring dissections, it has been found to have α₁-antitrypsin deficiency. (Schievink W. I. et al., 1994; Martin J. J. et al., 2006) Other genetic mutations affecting the stability of the vascular wall have been noticed as well. (Pezzini A. et al., 2002) A significant connection between migraines and arterial dissection has been identified, possibly due to alterations of the vascular wall, caused in the case
of migraines by repeated episodes of the vascular wall edema. (D’Anglejan-Chatillon J. et al., 1989; Tzourio C. et al., 2002) It has also been noticed a connection between the arterial dissections and the presence of some infections. (Guillon B. et al., 2003)

The post-traumatic dissection may appear after minor traumas: stretches, sudden or exaggerated rotations during some home activities or minor accidents (Blum A. C. et al., 2015; Mokri B., 1990), after chiropractic maneuvers (Lansley M. J., 1993; Lee K. P. et al., 1995; Hufnagel A. et al., 1999; Rothwell D. M. et al 2001; Haneline M. et al., 2004) medical maneuvers (Tettenborn B. et al., 1993; Gould D. B et al., 1994; Riccheui A. et al., 1999; Testai D. F. et al., 2010; Ringrose T. et al., 1999), paroxysmal cough (Skorowronski M. D. et al., 2003), vomiting (Kumar D. S. et al., 1998), or extended forced positions. (Machado D. M. et al., 1999; Shnobha N. et al., 2010; Mourad J. J. et al., 1997) The traffic accidents are by far the most frequent cause of arterial dissections. (Haneline M. et al., 2005; Janjua K. J. et al., 1996; Beaudry M. et al., 2003; Yang S. T. et al., 2006; Uhrenholt L. et al., 2015) Most often the arterial dissections are due to deceleration during accidents. (Patel N. N. et al., 2001; Srivastava A. et al., 2008) The seatbelt can have a decisive role in the accident’s outcome. (DiPiera C. A. et al., 2002) The diagnosis is sometimes difficult, as the patients have no traumatic signs and the post traumatic neurological signs are not present immediately. (Osborne D. L. et al, 1999) Considering the severity of the symptoms and the risks of the patients with such post-traumatic lesions, specific screening procedures were implemented for patients at risk of cervical arteries dissection. (Carillo Kerwin A. J. et al., 2001)

The symptoms of arterial dissections include signs correlated directly to the impairment of the vascular wall (laterocervical pain, facial pain or headache with suggestive characteristics) signs due to the impairment of the vascular lumen (cerebral ischemia manifestation, transient ischemic attacks (TIA) or cerebrovascular accidents (CVA), and possible signs due to the expansion of the vessel with the compression of the adjacent structures (paralysis of the inferior cranial nerves and Claude-Bernard Horner syndrome). (Caplan R. L., 2008; Blum A. C. et al., 2015; Baumagartner R. W. et al., 2005; Biousse V. et al., 1995; De Bray J. M. et al., 2005)

The most frequent symptom is the pain, because the cervical vessels have a rich network of nervous fibers sensitive to pain. The pain can be cervical pain, pain located at the level of the face or headache. The headache can be generalized, but usually it begins at the level of the dissection. The pain usually precedes the other clinical symptoms. The time frame before the appearance of other symptoms varies from a few minutes, to hours, days, or weeks. (Silbert P. L. et al., 1995; Campos C. R. et al., 2007)

The cerebrovascular accidents are the most severe category of symptoms subsequent to arterial dissection. (Caplan R. L., 2008; Blum A. C. et al., 2015; Baumagartner R. W. et al., 2005) The cerebral ischemic manifestations can be the result of vascular stenosis/occlusion, but most frequently they are the result of microembolisms at the level of endothelial lesion subsequent to dissection. (Baumagartner R. W et al, 2001; Cosottini M. et al., 2005) The extended cortical strokes (Weiller C. et al., 1991; Steinke W. et al., 1996) happen most frequently, but small asymptomatic strokes may also occur. (Cosottini M. et al., 2005)

The dissections which spread towards the adventitia frequently cause paralysis of the inferior cranial nerves (Mokri B. et al., 1996; Heckmann J. G. et al., 2000) and the impairment of the pericarotid sympathetic plexus. (De Bray J. M. et al., 2005)

The paralysis of the hypoglossal nerve in the internal carotid artery dissection (ICAD), although rare, is already well known and described in the literature. (Freilinger T. et al., 2010; Urseakar M. A. et al., 2000; Shahab R. et al., 2001; Lieschke G. J. et al., 1988; Marin I. F. et al., 2009; Olzowy B. et al., 2006; Boukobza M., 1998; Lindsay F. W et al., 2009; Verdalle P. et al., 2001; Ahmad A. et al., 2009; Spitzer C. et al., 2001; Riancho J. et al., 2013) The frequency of secondary hypoglossal nerve paralysis in the case of internal carotid artery dissection (ICAD) is estimated at 10% of the ICAD cases. (Mokri B. et al., 1996; Sturzenegger M. et al., 1993)

The tongue edema is explained by the liquid flowing from the intracellular space to the extracellular space in case of tongue denervation. (Rajan S., 2003)
In the presented case there was a trauma due to traffic accident consisting in a sudden deceleration, possibly aggravated by the patient wearing the seat belt. The lesion of the arterial wall was immediately felt by the patient as a left lateral cervical pain. The expansion of the intramural hematoma led to the appearance of tongue edema and paralysis by morning. In this case the time frame between the minor trauma, practically neglected by the patient and unknown by the medical services at the moment, and the appearance of the symptoms was not long. The appearance of pain, followed by the hypoglossal nerve paralysis and tongue edema is very suggestive for the diagnosis. Unfortunately, many cases are misinterpreted as infections (Freilinger T. et al., 2010; Olzowy B. et al., 2006; Riancho J. et al., 2013; Rajan S., 2003) or tumors. (Olzowy B. et al., 2006; Ahmad A. et al., 2009; Riancho J. et al., 2013)

The diagnosis was suggested by the clinical aspect, the time connection between the trauma and the appearance of the clinical signs, and sustained by imaging examinations CT, CTA, MRI and MRA. Angiography was not performed as the patient was stable, the evolution was favorable and the diagnostic elements obtained by other methods were sufficient. (Chen C. J. et al., 2004; Taschner C. A. et al., 2005; Paciaroni M. et al., 2005)

The Doppler examination was within normal parameters, due to the fact that despite the vascular lumen stenosis, the flow was maintained. The lesion area was not visible for examination as it was located exactly at the entrance of the internal carotid artery (ICA) into the carotid canal. The Doppler examination brings important diagnostic elements when in the case of a sub-intimal dissection that causes significant modifications of the vascular flow and possibly intimal flap, or arterial occlusion. (Benninger D. H. et al., 2005; Sturzenegger M. et al., 1995)

Anticoagulant treatment with heparin was administered, followed by vitamin K antagonists, with the patient’s INR under observation. The results with aspirin and anticoagulants seem to be similar. (Baumgartner R. W., 2008; Beletsky V. et al., 2003)

The evolution continued to be favorable, with the complete restoration of the arterial wall, but it could have been possible for complications to appear: cerebral ischemia manifestation by spreading of the lesions at the level of the intima or the appearance of a pseudoaneurysm on the segment where (Touze E. et al., 2005) the intramural hematoma was initially formed. The patient was kept under observation up to full recovery.

The lesions caused by post-cervical contusions are relatively frequent in the medico-legal pathology. (Marjaei A., 2011; Perotti S., Bin P., 2013; Dermengiu D., 2002; Mihalache G., Buhas C., 2012) The ICA dissection following a minor traffic accident, such as the presented one, is a rare case. It should be emphasized once again that the arterial lesions are frequently unrecognized in the initial phase due to the diversity of the clinical signs and the different degrees of severity, from a simple pain, up to lesions of the cranial nerves, as in the previously mentioned case, or up to severe vascular accidents in other cases described in the medical literature. The sudden deceleration causes a brutal flexion followed by a brutal extension of the ICA. The presence of the seat belt increases the risk of some contusional lesions at the level of the neck. The trauma lesions are absent or minimal: a minor contusion at the level of the neck. Sometimes, the actual collision between vehicles may not occur, and the deceleration due to the sudden brake remains the sole traumatic agent. The presented case is very rare; this explains the failure to diagnose the patient on the initial examinations. This particular case and its diagnostics investigations are found in the medical literature. The persistence of the symptoms, imaging examinations, lack of previous vascular lesions, and presence of a contusion type of cervical trauma due to sudden deceleration associated with wearing a seatbelt, and the chronological criteria makes it possible to identify the cause-effect mechanism between the traffic accident and the appearance of the arterial lesions.

Conclusions
1. A traffic accident of low intensity may cause internal lesions which manifest as a complex neurological picture. The correct anamnesis can direct the clinician to correlate the minor trauma the patient has suffered with the subsequent symptoms.
2. The highly accurate paraclinical investigations (especially the MRI with contrast agent and the CT scan) establishes the diagnosis of the lesion, in this particular case the dissection of the internal carotid artery, which caused the neurological condition.

3. The external traumatic lesions due to traffic accidents can be minimal or even unobservable. This does not exclude the presence of lesions to the internal organs, vessels or nerves.

4. The interdisciplinary cooperation between the forensic physician and neurologist in this case led to issuing a medico-legal document that offered an objective answer, in accordance with the medical facts, to the legal matter of the case. Essentially, a connection was established between the traffic accident, the lesions suffered by the patient, and the neurological complications of these lesions.

AII.5. The correlation between alcohol consumption and the car accident. Forensic aspects


Is it true that car accidents can be directly connected with the alcohol consumption of the driver or of the victim, the pedestrian? We are trying to answer this question by analyzing 2 aspects:

- how many drivers were caught under the influence of alcohol at the time when they were involved in a road event (accident, with or without any victims, routine check, etc) and
- if the pedestrians or the persons seated in a car were under the influence of alcohol when the accident happened?

The forensic doctors, because of the toxicological laboratories in the forensic institutions, can easily supervise these 2 aspects. Here, the alcohol test results, certificates and victims’ examinations are analyzed and elaborated.

In our study we were interested in the following items:

- the gender and the age of the drivers and victims from the car accident.
- the alcohol blood value established by the toxicological analyze.
- the gravity of the lesions transcribed into days of medical care.
- the consequences of the accident (death, invalidity, infirmity, etc).

The study was performed from January 2006 to January 2007. During this time, at our forensic laboratory, a number of 2400 alcohol blood tests were made, 1400 of them of the drivers or victims of a car accident. 70% of the drivers involved in a car accident were under the influence of alcohol at the time when the accident had happened. The alcohol test results were situated between 0,20 grams / 1000 grams and 3,15 grams / 1000 grams. A very important situation is that a large number of car drivers involved in a car accident had an alcohol test result bigger than 0,80 grams / 1000 grams. This means, under the actual laws, that they have committed a felony. A large number of these drivers had the value of their alcohol test results bigger than 1,8 grams / 1000 grams, corresponding to a severe alcohol intoxication. These drivers were hardly able to maintain their body balance while standing. Regarding the gender of the drivers who provoked a car accident, 95% were men.

Following these results of the persons involved in car accidents, we realized a very interesting fact: a large number of drivers who did not provoke a car accident, but were pulled over for a simple routine check, were found under the influence of alcohol. There are also the paradoxical results in which, due to a simple failing to grant the way, the guilty driver was sober, while the victim was drunk. The study’s conclusion is something to worry about: the drivers caught up by the police drinking and driying are just the tip of the iceberg represented by persons who drink alcohol and then sit behind the wheel. We can only make suppositions, but on certain moments of the day like the afternoon, evening and night, at least 25% of men driving a car are under the influence of alcohol.
Regarding the pedestrians, just a paradoxical number of 40% were found under the influence of alcohol. A reason for that 40% was that the majority of the pedestrians were women and children.

Regarding the gravity of the lesions, we have to mention the following: only 15% of the drivers that were found under the influence of alcohol died in the following period of time. More than 50% of them had suffered lesions that needed more than 20 days of medical care. 1/3 of them still has infirmities or invalidities. 25% of the pedestrians have lost their lives. 30% of the pedestrians who survived had suffered severe lesions, fractures, broke the internal organs and needed more than 20 days of medical care. Regarding other victims of car accidents, a number of 18% of the persons sited in the cars had passed away. Half of the persons who saved their lives had suffered severe lesions. The other half had suffered only minor lesions with no invalidity or infirmity.

From all the facts mentioned above, we could easily connect the alcohol consumption with the car accidents. The car accidents are very dangerous and have the tendency to increase their gravity, as the alcohol consumption increases as well. Because of this reason, it is the professional duty of every person working in these types of institution (forensic laboratory, law court, and hospital) to point out, by any means, the danger of alcohol consumption on daily road participants.

AIII. Research and contributions in the field of forensic tanatology

Forensic autopsy is one of the forensic activities of a forensic physician. Research in this field begins practically from the residential period. There are a few essential steps to be taken in forensic thanatology: determining the moment of death of a person, the type of death (violent, nonviolent), the tanatogenerator mechanism and the causality connection. The key to forensic activity is the doubtless mention of the tanatogenerator mechanism, which was my main concern in my studies in this field. But we also studied the influence of environmental factors in explaining the moment of death and, last but not least, the suicide-related issues in the forensic practice.

By selecting the most difficult but also spectacular cases of this kind we have made many published scientific papers, out of which we present the most significant ones.


Introduction

After death, the human body becomes a cadaver. Frequently, there are situations when the cadaver does not follow the usual course to inhumation with the specific ritual encountered in different cultures and religions. The cadaver may remain either, for a short period or longer period of time in the place where death has occurred, being found days, weeks, years or even thousands of years later. In these situations the environmental factors are those which will influence the evolution of the cadaver towards one of the following: rapid decomposition or the preservation under different forms.

On the other hand, a cadaver exposed to the external environment can be a source of pollution, meaning that it can become a source of infection, soil contamination, and especially water contamination. Most often the nature acts in such way that the cadaver either decomposes rapidly, and all organic substances disappear, the only remaining substances being the inorganic ones (minerals), or the decomposition is limited or absent, and the cadaver conserves for an unlimited period of time (Dermengiu D., 2002; Moraru I., 1967).

For most societies, the need to “manage” a deceased person is done according to a very precise religious set of rules, which are basic hygiene rules, in other words, rules for public health. Some illustrating examples are: The Muslim burials which take place in the first 24 hours after death, more precisely before the sunset on the same day as the death occurred; the cadaver
is buried in dry, sandy soil. The Jewish bury the cadaver without clothing, just wrapped into a white linen shroud; the cadaver is introduced into a plain, rough, wooden box which is buried in a grave dug into the sand. Why are all these rules necessary? The dry sandy soil facilitates a rapid dehydration of the cadaver, resulting in preservation; the rough wooden box has spaces between the boards which allow the rapid dehydration; the short period between the time of death and burial does not allow the onset of putrefaction. (Beliș V., 1995)

**Material and method**

We further present the two courses of evolution of the cadaver when it remains over a period of time in the same place where the death occurred.

I. The evolution towards the development of destructive modifications: The cadaver is in contact with the air, at high temperatures (on a field, in the woods, in isolated buildings, etc). The precocious signs of death appear rapidly (cadaveric rigidity-rigor mortis, cadaveric lividity-livor mortis, internal organ autolysis), and they are followed by the tardive signs of destructive type, the main one being putrefaction. The cadaver begins the putrefaction process and decomposes. A very important and beneficial role in this process is played by the necrophagous insects and their larvae. Slowly the cadaver becomes skeletonized, all the soft tissues disappear and only the skeleton remains, sometimes partially covered by clothing. If the cadaver is aggressed by small animals (example: rodents), or larger animals (dogs, cats, foxes) will break apart, fragment, and this fact will create medico-legal and juridical problems regarding the identification, or if fractures are produced, they will create problems in the interpretation of the fracture’s mechanism (did the fractures happen while the person was alive or after death, are they due to animal aggression?).

Based on the action of the environmental factors the decomposition of the cadaver is either faster or slower. The higher the temperature and humidity, the faster the evolution is towards putrefaction. (Beliș V., 1995)

Example: male, 28 years old, athletic built (weight-110kg, height-190 cm), shepherd, known with epileptic condition, went missing from the sheepfold on an August day, when the maximum day temperature was 30 degrees and the night temperature was 19 degrees. He was found 9 days later at the edge of a corn field, in the sun, wearing only shorts and a shirt, with an empty vodka bottle next to him. The cadaver was 90% skeletonized, the only areas which still had soft tissue (muscles and fat) were the buttocks and the posterior areas of the thighs. The only skin found was on the feet, which were covered by shoes. The internal organs were gone for the most part.

The cadaver did not have any fractured bones. The state of cadaver after 9 days was due to extremely rapid putrefaction and the action of flies and other necrophagous insects and their larvae. The autopsy conclusions were based on the data received from the criminal investigation team, and on the previous medical history of the deceased. It was established that his death was non-violent, most likely due to an epileptic crisis induced by alcohol consumption.

II. The evolution of a cadaver under the influence of particular environmental factors is completely different based on the physical and chemical properties of these factors, resulting in a natural preservation of the cadaver.

A. The dry heat and lack of humidity, at times associated with rapid air currents, sometimes preserves the cadaver extremely well, even spectacular, creating a natural mummification of the cadaver due to its rapid dehydration. The lack of water does not allow the development of putrefaction. The mummified cadaver is very light due to the fact that it loses up to 80% of its initial weight. (Baciuc Gh., 2003; Dragomirescu V. T., 1999)

Example: 1. In an underground water system with 40 cm pipes which transported superheated water, a male cadaver was found, his height was 175 cm, lightly dressed, laying on a mattress; the cadaver’s weight was 17.5 kg; it was easily identified due to the preservation of the facial features, and his tattoos which he got while alive were perfectly visible on the dry skin; the investigation established that his death occurred 3 years prior to the cadaver being discovered; it
was not possible to establish the exact cause of death, only the fact that the cadaver did not have post-traumatic lesions.

2. Female, 58 years old, victim of a traffic accident, undergoes autopsy and she is buried in the cemetery in the village Valea lui Mihai, Bihor County, where the soil is sandy and very dry; it is requested an exhumation after one year since burial; when the casket, which was practically buried in sand, was opened, the state of the cadaver strikes due to its extremely good preservation; this happened because of the cadaver’s dehydration and total lack of putrefaction; only small parts of the cadaver were covered in white mold deposits; it was possible to observe the traumatic lesions, which allowed for the reconstitution of the mechanism which caused these lesion during the accident.

The mummification has also other advantages. The very good preservation thorough mummification of the cadavers is seen in some places as wonders, miracles, divine signs, etc. Important deceased religious figures from the past are often presented to the public as miracles because of the good preservation of the cadavers through mummification due to environmental conditions. (Dermengiu D., 2002). However, it is not hard to explain why a monk who died in a cave situated in the desert, found deceased after a long time, is in a good state of preservation. Subsequently, the mummified cadaver is displayed and presented to the public as a miracle.

B. When the cadaver is exposured for a long time to an intensely mineralized environment, with acid pH, the form of preservation is called lignifications (or tanning).

The typical condition for this kind of cadaver preservation is found in the muddy swamps and the acid swamps. There are areas with heavy mineralized and acidic soils, especially in the areas of oil exploitations. (Mihalache G. et al., 2007).

Example: male, 44 years old, buried in the vicinity of the village Suplacu de Barcau, without an autopsy being performed, even though the death was violent; the exhumation of the cadaver was requested one year after the death occurred; the soil where the casket was buried was swampy; the casket was brought up to the surface with difficulty because it was practically under water; upon the removal of the casket lid, it was found that water had infiltrated into the casket and the cadaver was immersed for one year; it was found that the cadaver was well preserved, the skin was dark color, brown, indurated; the internal organs were also well preserved and around the neck it was possible to perfectly examine the hanging groove; it was possible to remove organs for the histopathological examination, which emphasized the importance of the hanging groove, it was confirmed that the hanging took place while the person was still alive.

C. When the cadaver is in a humid environment without oxygen or little oxygen for a long period of time, in clay soils or stagnant water, the preservation is called saponification (or adipocere). The saponification of the cadaver’s fat tissues and also the solidifying of the fatty acids by hydrogenation occur. (Iftenie V., 2006)

Example: an obese 70 years old female, missing from her residence, three months later her cadaver was found into an abandoned water well at the edge of the village; in this water well the villagers used to discard the cadavers of their deceased domestic animals; when removed from the water well, the woman’s cadaver was relatively well preserved especially the anatomical segments which were submersed under water (head, thorax, abdomen); on these areas the skin was whitened, friable, and the subjacent adipose tissue was transformed into adipocere, with a gray-greenish color, gelatin like, greasy, with an ammonia smell; the examination of the cadaver which was preserved in this manner allowed the exclusion of violent lesions caused prior to death.

D. An environmental factor extremely important in the cadavers’ preservation for an unlimited period of time is the cold. The lower the temperature, the better the preservation of the cadaver. A frozen cadaver can last without modifications for hundreds of years. (Dermengiu D. et al., 2012)

Example: male, 35 years old, amateur mountain climber, missing following an avalanche; the search goes on for 5 months, and in the spring of the following year he is randomly found,
still buried under the melting snow; the cadaver was partially frozen and perfectly preserved and the histopathological examinations which followed were able to establish the cause of death: asphyxia, and have excluded the presence of lesions.

**Discussion**

Regardless the direction of the evolution of the state of the cadaver, due to the influence of the factors present in the environment where the cadaver remains for a period of time after death, there will be a series of problems which will make it difficult to perform the medico-legal expertise. Problems such as:

- Putrefaction: modifies the characteristics of the wounds and destroys the conclusive character of the lesions; necrophagous insects produce artifacts which imitate traumatic lesions; hinder the cadaver’s identification in such a way that after years it can only be done by examining the teeth and bones; (Dragomirescu V. T., 1996); causes difficulties in assessing the date of death, and in the execution of the laboratories examinations (example: bacteriological determination) or in detecting toxic substances (the putrefaction decomposes the organic toxins, ptomaines give false positive reactions – identical to the alkaloids’). (Beliş V., 1995)
  - Mummification: makes the conclusive character of the violent lesions hard to be identified; generates difficulty in the assessment of the date of death; the mummified cadavers can be destroyed by insects which feed on dry, soft tissues (moths, mites).
  - Lignification: it does not cause problems for the medico-legal expertise; it preserves the cadaver indefinitely (example: the cadaver in Tollund, 2000 years old); allows toxins determination. (Cocora L., 2003)
  - Adipocere (saponification): the cadaver is very friable, and it has to be maneuvered with great care; it has to be kept away from heat to avoid destroying the saponified fats. (Dermengiu D. et al., 2012)
  - Freezing: the autopsy must be performed immediately after defrosting due to rapid putrefaction; it causes the loosening of the cranial sutures and as a result a differential diagnosis with cranio-cerebral traumatism is required.

**Conclusions**

1. The environmental factors by their complexity and diversity act upon the human cadaver in two ways: the natural preservation of the cadaver or its decomposition through the putrefaction process.
2. The forensic pathologists, especially, need to know how the environmental factors act upon the cadaver, and they need to interpret correctly the modifications which occur on the cadaver due to the action of these environmental factors.
3. Taking into consideration and correctly interpreting the action of the environmental factors upon the cadaver, the forensic pathologist can estimate the date of death, and moreover, may establish the cause of death.
4. The natural preservation of the cadavers eases some medico-legal activities such as organ sampling for histopathological and toxicological examination, all these being very useful in establishing correctly and with certainty the cause of death.
5. A better institutional collaboration between the specialists who analyze and follow the environmental factors (meteorologists, specialists from the national environmental protection agency, etc.) and the forensic pathologists is required in order to provide the pathologists with relevant data in due time about the environmental conditions in a specific region at a particular time (the moment of the person’s death in the area where death occurred).

Knowing the action of the environmental factors upon the cadavers, the phenomena which is being publicized as being wonders or even supernatural phenomena can be explained and scientifically proven by the forensic pathologists.

Introduction

Skeletonisation of a cadaver at an environmental temperature of 18 - 20 degrees Celsius occurs after approximately 3 years. (Dogăroiu C., 2011; Dogăroiu C., Dermengiu D. et al, 2010; Pinheiro J., 2006) Under the conditions of humidity, high temperatures, and intense insect activity, this process can happen over days or weeks. (Dogăroiu C., 2011; 5; Belis V., 1995) On this kind of cadaver which lacks soft tissue, the mechanism which produced the lesion is difficult to identify; lesions of the bones being the only ones, most often, are the only ones that can offer concrete data regarding the cause of death. (Dolinka D. et al, 2005) Any means of fractured bone reconstruction and especially cranial reconstruction or any bio-criminalist investigations are welcomed in these situations. (Dogăroiu C., 2011; Dermengiu D., 2002) Also, bone radiography is important; it can sometimes emphasise fragments protruding from the traumatic agent embedded in the bony structure; (Perry S. Jr., 2003, Georgescu S. A., Zaharia C., 2001) this is an essential step in establishing the cause of death and the thanatogenerator mechanism. (Romans L., 2001) These investigations are considered even more useful when the putrefaction, a destructive process which also affects the bones through a mechanism called diagenesis, is under the influence of microbes and environmental factors and affects the chemical and microscopic structure of the bone, thereby making difficult the bone decalcification and the following histopathological investigation necessary to establish the vital reaction. (76; Buhas C. et al, 2006; Aydin B. et al, 2010; Sener M. T. et al, 2012; Murray P.R. et al, 2002)

Case report

History. On 10th August 2011, the victim, 71 years old male, together with the perpetrator, a young male under 30 years old, leave in the night for an illegal hunting trip. The two men were supposedly friends. Following this particular date, the victim has not been seen. He had been reported missing and searched for in the surroundings and at different relatives homes. On the 26th of August 2011, the victim’s cadaver was found in a wooded mountain area, partially covered with branches, in the state of putrefaction, the neck and cranium being already skeletonised. After the victim was found the perpetrator turned himself in and he claimed to have accidentally shot the victim while he took the weapon out of the car in a narrow place with no visibility. He was put under preventive arrest.

Images of the scene where the skeletonised cadaver was discovered.
Medico-legal chronology of the case.

The first medico-legal assessment concluded that the lesions at the level of the cranium were due to a cranio-maxilo-facial and vertebro-cervical traumatism produced by repeated strikes with a hard object. Based on the scene investigation and the following result of the medico-legal assessment, the perpetrator was charged with homicide and sentenced to 25 years in prison.

Aspects of the cadaver at the autopsy, aspects of the cranial focal fracture.

The case was reopened and participation of an expert assistant was requested for a new medico-legal assessment. This time, based on the cranial reconstruction and bio-forensic investigations (cranial and cervical column radiography; X-ray spectrometry), the assessment specified that the generating mechanism was consistent with the use of firearm, and the trajectory of the bullet was also specified (the entry orifice - posterior cervical with the direction of postero-anterior, inferior to superior and left to right, with cranial base fracture and fractures of the facial bones where the exit orifice of the bullet was identified). (Dermengiu D., 2002; Romans L., 2011; Belis V., 2001)

Following this assessment the perpetrator was retrialed, charged with manslaughter and convicted to 5 years in prison.
The radiological examination which shows the small metallic fragments and X-ray spectrometry with fluorescent spectrometer with X-ray, Eagle III, μProbe, in vacuum emphasised the composition of the fragments (lead – 95.5% and antimony – 4.5%), identical to a Brenneke type of bullet from a hunting rifle. (Romans L., 2011; Narayan Redyy K. S., 2000)

Cranial reconstruction.

**Case discussion.**

The high degree of fragmentation with the numerous shards in the focal fracture of the neuro and viscero cranium initially gave an indication that the generating mechanism of the lesions was consistent with repeated impact from a hard, blunt object. Most certainly, the environment where the cadaver was found, the weather factors, the investigation of the scene, collection of the bone fragments under difficult conditions (humid ground and leaves), and possibly the transport and preservation of the evidence contributed to the poor initial examination and reconstruction. (Dogăroiu C., 2011; 76; Murray P. R. et al, 2002) The direct result was the wrong conclusion regarding the generating mechanism of the lesions and was very difficult to fix in due time. In this context, the right mandibular ramus was the traumatic element which sustained the initial conclusion of impact with a hard object, but subsequently following the re-examination of the focal fracture and para-clinical investigations, it was established that this fracture was most likely an artefact (the bone must have been stepped on).

A new and more detailed examination, which also included the examination of the first cervical vertebrae, suggested that the generating mechanism of the lesions a gunshot wound had a trajectory postero-anterior from the posterior cervical region towards the base of the cranium and the facial bones in the right maxillary region. Under these conditions the cranial reconstruction conducted in a performant anthropologic laboratory (especially the paraclinical investigations consisting in cranial bone fragments radiography) and the subsequent spectrophotometric analysis of the small metallic fragments embedded in their bone plate was able to solve the case and to specify without a doubt that the lesions were produced by a gunshot wound from a hunting rifle with a single fragmenting bullet. (5; Dogăroiu C., Dermengiu D. et al, 2010; Romans L., 2011; Narayan Redyy K. S., 2000)
Conclusions
1. The interdisciplinary approach of this case has determined with certainty the generating mechanism of the cranial and cervical vertebrae fractures. Following the second assessment, the initial mechanism which led to the wrong legal basis was rectified from an impact with a hard object to a gunshot wound to the cervico-cranial region, establishing the correct legal basis to charge the perpetrator (manslaughter).
2. It is mandatory that the skeletonised fragments of the cadaver be paraclinically investigated because of their radiographic findings being, as in the presented case, a decisive element in determining the generating mechanism. We also recommend investigations of the microscopic examination of the bony fragments out of the focal fracture to state its vital character.


It is thought that suicide is the final result of a long chain of reasons and causes. That’s why; suicide differs according to the century, society and individual. (Belis V., 1995; Cocora L., 2003)

In children and teenagers these arguments are different. So, suicide attempts are very rare at the age less than 10, because children do not have the feeling of death, their knowledge and conceptions about the death phenomena are partial and confuse. (Dermengiu D., 2001; Mihalache G. et al. 2007) Specialty studies found suicide cases at age of 3 to 4, cases considered to be involuntary and irrational or realized by imitation or identification act of emotional close person, who died or caused suicide. Only at age of nine, the child realizes the fact of death, until then the suicide is not irrelevant, it just has the element of accidental as determinant concept. (Astărăstoaei V. et all., 1993) Suicide earlier than ten years old is found in schizophrenics (or in those with schizoforme reaction), or less found in an impulsive act or sometimes is a result of a long mental exposure. (Belis V., 1990)

In teenagers things are more different, suicide is more frequent (at 15 to 18 years old is 6-7 times more often than in childhood age), determining factors are those of psychogenic type (e.g.: strong psycho traumatic events, no affective feelings, revenge elements and so on). (Florian S., Mihalache G., 1999) It is believed that real cause of teenage suicide it is their real condition of teenagers, age characterized by wish of death and of the search of itself. (Cocora L., 2003; Dermengiu D., 2002)

The present work represents a statistic study over suicide at the childhood and teenage ages in Bihor County during 2007-2009.

Material and method
There were analyzed 65 reports of the medico-legal examination performed at Medico-Legal Service of Bihor County – Oradea during 2007 - 2009 as a result of the autopsies of children and teenagers who done suicide through different ways during this time period. For the studied cases we considered next parameters:

1. Number of suicide cases registered during 2007 – 2009 at Medico-Legal Service Oradea, in persons younger than 18;
2. Case repartition according to the mechanism of the suicide;
3. Case repartition of suicide according to the age group;
4. Case repartition according to the sex group;
5. Case repartition according to the place of origin.

Results and discusions
1. According to the necropsy reports done in the Medico-Legal Service of Bihor County – Oradea, during the 3 years of study were found a considerable decrease of the suicide number in children and teenagers, the minimum being reached in the 2009 year.
### Table I

<table>
<thead>
<tr>
<th>Total of suicide cases before age of 18</th>
<th>Year 2007</th>
<th>Year 2008</th>
<th>Year 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>64</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Percent %</td>
<td>46 %</td>
<td>37 %</td>
<td>17 %</td>
</tr>
</tbody>
</table>

**FIGURE I**

*Number of suicide cases in children before age of 18*

Total number of the 64 suicide cases in children and teenagers it is considered to be really high, explained by psychic instability characteristic to the teenage age, jealousy, love deceptions and social problems.

2. The most frequent method used in suicide it was hanging, about 54%. This was found mostly in the male sex. Another registered mechanism was intoxication with medicines or a toxic substance, found mostly in the female sex.

### TABEL II

<table>
<thead>
<tr>
<th>Suicide method</th>
<th>Nr Of Cases</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drowning</td>
<td>10</td>
<td>16 %</td>
</tr>
<tr>
<td>Hanging</td>
<td>35</td>
<td>54 %</td>
</tr>
<tr>
<td>Intoxication</td>
<td>19</td>
<td>30 %</td>
</tr>
</tbody>
</table>

**FIGURE II**

*Suicide case repartition according to the mechanism of suicide*

3. Most frequent suicide cases were found in the age group of 13 – 18 and then in the one of 7 – 12, having as favoring factors interfamilial arguments/fights, failure in love or jealousy, based on alcohol consumption or psychic instability.

### TABEL III

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Nr of cases</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 6</td>
<td>5</td>
<td>8 %</td>
</tr>
<tr>
<td>7 – 12</td>
<td>27</td>
<td>42 %</td>
</tr>
<tr>
<td>13 – 18</td>
<td>32</td>
<td>50 %</td>
</tr>
</tbody>
</table>
4. We found out that the highest frequency of suicide cases is in male sex, produced by drowning or hanging and less by medicines or toxic substances intoxication, which is found to be more frequent in female sex.

**TABLE IV**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Nr of cases</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male sex</td>
<td>42</td>
<td>66 %</td>
</tr>
<tr>
<td>Female sex</td>
<td>22</td>
<td>34 %</td>
</tr>
</tbody>
</table>

5. Most frequent suicide cases were found in the rural area, due to decreased level of culture and information.

**TABLE V**

<table>
<thead>
<tr>
<th>Place of origin</th>
<th>Nr of cases</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>23</td>
<td>26 %</td>
</tr>
<tr>
<td>Rural</td>
<td>64</td>
<td>74 %</td>
</tr>
</tbody>
</table>
Conclusions:
1. Suicide in children and teenagers is a frequent phenomenon in the past years (according to the 64 case study in the Bihor County during the past 3 years), this could be explained by social and educational media, psychic instability so characteristic to the teenagers, jealousy, love deceptions and negative school results.
2. Frequently used method of suicide, used by children and teenagers, was found to be hanging (found more in males, which case number is higher) as well as medicine ingestion or toxic substances (found more in females).
3. The most involved age group is 13 – 18 years, favoring factors being love failure, jealousy, psychic instability, alcohol consumption.
4. Place of origin of the victims was particularly high for those from rural media being as high as 74%, due to low access to the education and information.
5. Psychic stress acts together with physical pain, being a triggering factor in suicide, found in minors as well as in teenagers, being their critical period of development which brings an emotional instability so specific for suicide.
6. Medico-Legal Examination has an important role in order to prevent these suicide acts in the children and teenagers by taking special care measures (hospitalization, informing investigation organs). During the Medico-Legal Examination performed in the preventive way, an important role plays psychiatric medico-legal examination.
7. There is presently a large treatment by mass media of the suicide cases, having a negative impact on the persons predisposed to suicide.

AIII.4. Spontaneous human combustion, homicide, suicide or household accident

The term spontaneous human combustion appeared in scientific literature for the first time in 1746. It is defined as total or partial carbonization of a corpse taking place in the absence of obvious ignition sources. (Rolli P., 1746) A survey conducted by Joe Nickell and forensic analyst John F. Fischer, which investigated more than 30 cases in the last 300 years, showed that the most likely ignition sources were candles, lamps, fireplaces and so on. (Nickell J., 1991) Scientific literature presents 200 reports of human spontaneous combustion cases spread over three centuries. (Arnold Lary E., 1995) Brian J. Ford put forward ketosis as one possible explanation; due to alcoholism or a low carbohydrate diet, it leads to the production of volatile acetone; when it is eliminated through breathing, as it is flammable it might lead to spontaneous human combustion. (Ford Brian J., 2012)

Case study
A 80-year-old man was found dead in his own yard, with 2nd and 3rd degree burns on 90% of his body (Belis V., 1995; 175) The house presented no signs of arson, except for a partially burned chair found near the victim. The corpse showed burns on 90% of the body (except on his left calf and foot, where the victim was wearing a boot). The right foot had 3rd degree burns with traces of charred footwear. The metatarsals and phalanges were partially calcined. One could also notice hematic infiltrates of 3 / 2.5 cm in the pericranial soft tissues in the left frontal area. The myocardium had a pearly white scar on the anterior wall of the left ventricle. The airways had soot deposits. (Belis V., 1995; 175) Survey data: retired man, who lived alone in a house with annexes, with conspicuous damage of the roof and concrete floor, rural area, poor conditions. The heating source was a wood tiled stove. The victim was rarely visited by family or neighbours.

Discussion
Accidental fire. Pros: improper use of the stove; the most common cause of death by fire. Cons: lack of evidence of fire in the house or in the annexes; small amount of potentially flammable materials (no wood floor or furniture); the atypical place where the body was found - in the courtyard.
**Suicide by pouring flammable substances on the body (gasoline, alcohol etc.).** Cons: lack of bottles or containers or traces of flammable substances; it is not a common way to commit suicide; lack of suicide attempts in the past; atypical distribution of the burns, possibly caused by flammable liquids (they go upward, typically including just one part of the body); the absence of an ignition source and of traces of fire on the surrounding objects.

**Murder, by throwing flammable substances.** Pros: anti-social personality. Conflicts with potential drinking companions. Murder with the purpose of robbery. Cons: lack of evidence or of containers of flammable substances; no other signs of struggle with a potential aggressor; lack of complaints from the neighbours about a possible conflict; atypical placement of the burns on the body, as they are usually located on one level; burns have vertical paths; partially burned clothes; wallet with money in it on the floor.

**Spontaneous human combustion.** Pros: Elderly person living alone, the extensive burning area, alcoholism, low carbohydrate diet, no traces of fire on the surrounding objects. (Parry L. A., 1938) Cons: spontaneous human combustion is a diagnosis of exclusion. (Toma T. et al, 2013; 143)

**Alternative explanation.** Information collected from the neighbors about unusual behavior, which can be found sometimes in homeless people, consisting of using nylon fabric tied with string around the limbs and trunk for better thermal insulation against cold, could lead to a reasonable explanation. Further information from the site show that two pieces of wood, approximately 1m long, burned at one end, were next to the stove. In addition, traces of burned material, possibly nylon, were noticed on the way from the stove to the place where the body was found.

**Scenario.** The victim wanted to protect himself from the cold, given the poor condition of the house, so he wrapped nylon fabric around himself and tied it with strings; the only regular clothing he had on was underwear, boots and socks. He sat on a chair in front of the stove, with his right leg resting on a piece of wood, sticking out of the stove, in order to heat his leg. The victim fell asleep and the fire reached the right foot (the deepest burns with the charring of the boot); he awoke and stood up, and then the fire spread quickly through the nylon fabric that was wrapped around the whole trunk and limbs, possibly also the cephalic extremity. The victim fled in the yard, leaving traces of burned nylon on the way there; he collapsed and died from combustion shock.

**Conclusions**
Considering the research data from the site and the autopsy results, the most plausible explanation would be death caused by the ignition of the nylon fabric wrapped by the victim around his body for better thermal insulation, given the precarious living conditions, from the misused stove.

The particularity of this case is the fact that a rational explanation of the burns found on the victim's body could be found only by piecing together research data from the scene and the autopsy. The possibility of alternative explanations and speculations remains open.

Spontaneous human combustion remains a diagnosis of exclusion, once all other possible explanations have been eliminated.

**AIII.5. Violent death by electrocution caused by atmospheric electrical discharge.**


**Introduction**
The electrocution induced by a natural electrical discharge in the atmosphere represents an electric aggression on the human body, and the modifications this produces on the human body represent the atmospheric electrotrauma (Iftenie V., Dermengiu D., 2009). Natural atmospheric electricity is mainly caused by the electrical phenomena of the storm clouds, the electrical state of the atmosphere, the electrical charge of the precipitations, resulting in a form of electrical discharge, highly dangerous to humans, called lightning strike that could be lethal to the human
The atmospheric instability leads to the formation of storm clouds which cause the electrical discharge in the atmosphere (Dogaru I., 2011) (Florian Ş., 2004). The power of lightning is between 10 000 and 200 000 A of current, voltage ranging from 20 million to 1 billion V, length up to 20 cm (Seidl S., 2006) (Beliş V., 1995). The effects of these atmospheric electrical discharges over the human body can be mechanical, calorific, and biochemical/electrolytic: from wounds with entrance and exit orifices, rupture of the viscera, erythema of the teguments with fern leaf aspect to first/second degree burns, partial or total carbonization of the body, from electronegen edema to metachromasia (Buhas C. et al., 2011) (Dogăroiu C. et al., 2010).

Establishing the diagnosis of death by electrocution caused by an atmospheric electrical discharge is done by correlating the data of the internal and external examination of the body, with the data from the investigation of the scene, and the result of the complementary investigations performed at the autopsy (histopathological examination, tanato-chemical) (Belis V., et al., 1992) (Dermengiu D., 2002).

Usually death occurs instantly, and could be caused by cardiorespiratory arrest (the inhibition of cardio-respiratory nerve center of the cerebral trunk), acute peripheral cardiac insufficiency (frequently ventricular fibrillations), or through acute peripheral respiratory insufficiency (respiratory muscles tetany) (Dogaroiu C. et al., 2010) (Iftenie V. et al., 2009) (Bucholtz A., 2015). In case of survival, victims could frequently have ocular lesions, hearing and speech disturbances, paralysis, etc. (Iftenie V., Dermengiu D., 2009) (Belis V., 1995) (Dickshit P. C., 2010).

Material and method
We will present the case of a female, age 33, deceased by electrocution caused by an atmospheric electrical discharge. The information provided by the investigation team tells us that the victim was caught in a thunder and lightning storm with heavy rain in The Apuseni Mountains while hiking. The young female separates from the group looking for shelter. After the storm passed, the female’s body was found inert in the vicinity of a tree which was struck by lightning. SMURD service is called, and upon their arrival they pronounced the victim’s death. The cadaver of the victim is transported to Bihor County Legal Medicine and Forensics Service, and the investigation team requests the medico-legal autopsy to establish the cause of death.

Result and discussion
The medico-legal autopsy revealed on the external examination signs of the actual cause of death, and identified signs of violent death. When examining the victim’s clothes: T-shirt (cotton), bra (mix of cotton and polyester), underwear (polyester) and trousers (cotton), these showed numerous areas with burn/melted aspect, mainly on the T-shirt and bra; the sport shoes of the victim were wet, dirty, torn and had holes on both medial sides (with a ruffled aspect) (img.1, 2, 3).

Img.1. The external examination of the body and bra examination: traces of ashes on the teguments and on the bra, burns of the tegument and bra, electrical mark, epidermolysis
The violent marks detected on the external examination of the body showed entrance and exit “electric marking” lesions due to the atmospheric electricity passing through, and burn lesions on the skin. The aspect of the violent lesions was brown-red, non-homogenous, hardened, paper like tegument areas, some in polycyclic shape, and others with irregular aspect, merging in some areas, localized on the cervical area, the thorax, and limbs as follows: posterior-cervical 1/3 midline, lateral thorax 1/3 superior and midline, anterior thorax 1/3 inferior, abdomen (mainly right), right arm 1/3 midline on antero-interior, right tigh 1/3 midline antero-interior, left thigh 1/3 midline posterior-interior, posterior right calf 1/3 inferior, right foot medially corresponding to the internal malleolus extending to the arch of the foot. On the left foot medially corresponding to the metatarsal phalange 1 articulation, an electric mark is noticed. In the vicinity of these areas the teguments are either erythematous of a red color or hyperpigmented, brown; in some spots with epidermolysis. The calfs have an edematous aspect (img. 1, 2, 3).

The internal examination of the cadaver revealed: plurivisceral stasis, asphyxia spots with small, reddish-brown aspect localized on the pericranial soft tissues and on the serosa (pleura, pericardium), leptomeningeal and cerebral edema, middle lobe rupture of the right lung, acute pulmonary edema, liquid blood into heart cavities, micro and macroscopic structural modification of the heart (muscular granular degenerations, myocardial fiber dystrophy with loss of striations, occasional broken muscular fibers, areas of parcelar necrosis, interstitial edema), of the brain and spinal cord (petechial haemorrhages in the brain and spinal cord, fragmentation of the axons).
The histopathological examination on the tissue fragments collected from the cadaver confirms also the presence of electric marks and burns, and the fact that those lesions were made when the person was alive.

**Conclusions**

Correlating the findings of the internal and external examination of the cadaver with the results of the histopathological examination and with the information provided by the investigation team, it was concluded that the victim had a violent death due to the electrocution from an atmospheric electrical discharge.

The external electrocution markings of the atmospheric electrotrauma on a cadaver are not as obvious on all cases. In these situations, the investigation information, the examination of the scene, knowing accurately the weather conditions at the time of death, the exam of the victim’s clothes, are extremely useful factors to establish the precise cause of violent death through electrocution caused by an atmospheric electrical discharge.


**Introduction**

Primary cardiac tumors are very rare especially in adult population. Most of them are found in childhood. (Richard A. Krasuski et al., 2000)

In children and infants, the most common cardiac tumor after the rhabdomyoma is a fibroma. (Abushaban L. et al., 1993) All over the cardiac tumor, fibroma is the second most common benign primary cardiac tumor after myxoma. Most of the fibromas are associated with Gorlin’s in adult population. (Mary N. Sheppard, Raad Mohiaddin, 2010) Basically fibroma is a benign connective tissue tumors derived from fibroblasts. The symptoms depend on the location of the tumor and include either sudden death or the development of cardiac failure. The majority of tumors that cause sudden death extend into the ventricular conduction system. (Mary N. Sheppard, Raad Mohiaddin, 2010)

The prognosis may be influenced by fibroma location and size and by episodes of arrhythmias. The predominant picture may be one of obstructive phenomena (obstructive cardiomyopathy type), or heart failure (dilated cardiomyopathy type), or arrhythmias, which may be life threatening. (Georgios S. Varlamis, 2005)

Primary cardiac tumors are uncommon, particularly in the adult population. (Richard A. Krasuski et al., 2000) In different studies the frequency of cardiac tumors is 0.001-0.03%. (Charles J. Bruce, 2011) According with the Bihor County Forensic Department records this is the single one case of cardiac fibroma in the last 15 years.

**Case report**

We present a case of a male patient, truck driver, 51 years old, found dead in the own truck near Borș custom, Bihor County, waiting in line to pass the Romanian-Hungarian border. The emergency system had been announced by one of his colleague, who discover the dead driver.

The police has been announced. On the occasion of on-site research, in the cabin truck was found a handbag of a woman, which is why there has been suspicion for some maintenance intercourse with a female person with unknown identity. They also found two beer bottles of 500 ml each. Later in the survey carried out by police has been identified as female person who has acknowledged his presence at the scene of the events and the consumption of alcohol. It has also been argued that, at the time that she left the cabin, the driver was aware of tyre and accuse a state of fatigue and chest pain. Relatively young age and the fact that the driver was professional, craft that involves periodic medical checkups do not suggest any organic condition.

**Autopsy findings**

Forensic autopsy was however that certainly explained the cause of his death. The diagnosis was established as common ground on both the rare and unexpected: bulky tumor left ventricle, complicated with acute myocardial infarction. Location of the tumor was in left ventricular myocardium, the postero-lateral face. On the surface, beneath the pericardium can be
observed a white plaque. On the bisected heart it was a rounded mass, white and whorled appearance. Tumor size was $6/5$ cm, and it was circumscribed. (Fig 1). The left ventricular myocardium show us the changes which feat with the acute myocardial infarction.

Toxicological exams were negative. In terms of the explanation of causal chains pathophysiology of this, is easy: the bulky tumor induced a major ventricular arrhythmia and vascular disorders in the branches of coronary arteries leading to myocardial ischemia. Also at autopsy were revealed extensive injuries of atherosclerosis and miocardial fibrosis.

The report's conclusions by forensic autopsy have established that death was nonviolent.

Figure 1. White round tumoral mass inside the left ventricle

**Method**

**Histopathology aspects**

The tumor was circumscribed but nor encapsulated, also from microscopically point of view. The hole tumoral mass is paucicellular. In the tissue examination can be seen bland-looking spindle cells. The entire tumor is arranged in intersecting bundles. The cytoplasm of the cell is pale. The nuclei are blunt-elongated without evident nucleoli.

The tumor is characterized by wavy elastic fibers, but no any signs of inflammation, calcification, necrosis, hemorrhage or mitosis. (Fig. 2)

Figure 2. Cardiac fibroma; wavy fibre and few blood vassels 400X HE

**Immunohistochemistry aspects**

An immunohistochemical analysis was performed on 4 µm-thick sections prepared from formalin-fixed paraffin embedded tissue, by using an automated immunostainer (Bechmark XT, Ventana Medical Systems Inc., Tucson, AZ, USA). Immunohistochemical assays were performed on a Ventana Benchmark XT automated staining instrument according to the manufacturer’s instructions. Slides were de-paraffinized using EZprep solution (Ventana Medical Systems, Inc.) at 900 C, and all reagents and incubation times were chosen as directed on antibody package inserts. Slides were developed using the OmniMap DAB (3,3’-diaminobenzidine) detection kit (Ventana Medical Systems, Inc.) and counterstained with Hematoxylin. We label the section with CD34 (BQEnd/10 clone), desmin (DE-R-11 clone), actin
muscle (HUC1-1 clone), S100 (4C4.9 clone), vimentin (V9 clone) markers provided by Ventana Medical Systems, Inc. (Chafin D. et al., 2013; 180)

Tumor cells express vimentin. In the higher magnification (400X) can be seen a low stain profile of vimentin antibody because is a more fibrilar tumor and less cellular. (Fig.3) The muscle actin expression is negative intratumoral, but it highlights the blood vessels walls. (Fig.4) The expression of desmin, which is a myogenic marker is negative in the tumor site. (Fig.5) CD34 or S-100 protein are negative also. Reactivity for markers of proliferation, are much more frequent in cellular tumors than in the fibrous ones. (De Montpreville V. T et al., 2001)

**Figure 3.** Immunohistochemistry; low stain for vimentin

**Figure 4.** Immunohistochemistry; muscle actin negative expression

**Figure 5.** Immunohistochemistry; desmin negative expression

**Discussion**

The main cause of death was acute myocardial infarction induced most probably by giant benign tumor. From medical records study we found that regular medical examinations, required in this case, as a professional driver, have been done but summary made in reality. The many medical examinations don't have highlighted pathological changes at the level of the cardiovascular system.

This could raise question marks over the quality of the examinations carried out regular to employees with a high risk jobs.
In this case the missdiagnosis could generate tragedies with human losses. Cellular fibromas are observed in infants during their first months of life, while fibromas in older patients contain large amounts of collagen. The case we presents is a rare cardiac primary tumor. The metastatic tumors of the heart occur approximately 20 to 40 times as frequently as do primary ones. (Alexander S. Geha et al., 2015)

It almost exclusively occurs within the myocardium of the ventricles or ventricular septum. According with WHO classification is not clear whether cardiac fibroma is a hamartoma or a true neoplasm. Because most cases occur in infants and children it is likely congenital. (162)

**Conclusion**

On the one hand the tumors of the heart are recorded on the occasionally autopsy in medical and forensic pathology. On the other hand, is the first cardiac fibroma found in last 15 years in Bihor County Forensic Department files. The ancillary techniques like immunohistochemistry is useful to get a straight diagnostic of the tumor origin and if it is a benign tumor or a malignant one.

**AIII.7. Experimental studies revealing the competing action of different factors (Carbon monoxide, Alcohol, Dyazepam) in thanatogenerator syndromes** (Folia Societatis Medicinae Legalis Slovaca, May 2011, ISSN 1338 – 4589, pp. 53 - 56)

**Introduction**

Thanatogenerator syndromes are one of the most important topics of the Forensic Medicine. Finding the thanatogenerator cause and conditions in which these occurred, helps in defining the conclusions: viewing the type of death violent or non-violent, triggering factors which lead to the mechanism of death as well as their developing in time. All of the findings are recorded in the causality report. In this way the Forensic Doctor offers to Justice unquestionable proves.

Most of the thanatogenerator syndromes are found in both: violent and non-violent types of death but the mechanisms of death and their evolution in time are different. These syndromes develop pathologies in three vital systems: Nervous system, Cardiovascular system and Respiratory system. (Bloom F. E., 1977; Mogoș G., Siteai N., 1988)

The Medico-Legal practice deals with many thanatogenerator syndromes in violent type of death. Our work describes the thanatogenerator syndromes in connection to intoxication. We performed an experimental study. We studied intoxications with Ethyl Alcohol, Diazepam and Carbon Monoxide (CO) separately and also a mixture of these substances in different doses and combinations. Their combination was found to be toxic and having a competitive factor in metabolism. (Lovejoi F. H. Jr., 1981)

Ethyl alcohol and Diazepam both have a depressive action on Central Nervous System. When used combined doses of Ethyl Alcohol and Diazepam the depressive action on CNS is more pronounced. (Ascione P. J., 1978; Kurzthaler I. et al, 2003) This is explained by metabolism reactions to these toxic substances, both of them using oxidative reaction at the hepatic level, then at the hepatic microsomes level. (Allali-Hassani et al., 1997) As a consequence to these reactions, there is a delay by competition of normal biotransformation of other therapeutic or toxic agents, which use the same metabolic reaction. In these conditions, above the mentioned substances are modifying their pharmacokinetics action and may induce pathologic side-effects, proved by all experimental studies. These side-effects were noticed in practice in combined administration of Ethyl Alcohol and Benzodiazepines, one of them inducing severe depressive action. (Bellantuano C. et al., 1980)

On the other hand, Carbon Monoxide induces hematological toxicity. Once it reaches blood, one small amount it is dissolving into plasma, but the great amount it is combined with Hemoglobin, which results in Carboxyhemoglobin (HbCO). In increased levels of CO are determined transportation asphyxia, because of the hematotoxic action of CO, and utilizing asphyxia, because it damages hemic ferments (myoglobin), also catalase and oxidase reactions.
Combining CO with one of the substances with a depressive effect (e.g. Diazepam, Ethyl Alcohol) makes more severe the respiratory insufficiency, because the CNS depression occurs in the same time induced by the depressive substances. (Aston H., 2002)

In the experimental studies we observed and defined two thanatogenerator syndromes: Respiratory Insufficiency Syndrome, very common in Carbon Monoxide intoxications, Comatose Syndrome, induced by increased doses of the toxic substances with CNS depressive effect. Coma is produced by the depression of the ascendant activating reticular system as well as the depression at the level of cerebral cortex and the distributive shock produced by vasomotor deficiency. (Aston H., 1995) These findings are present in all three types of toxic substances, when are administered or used in certain concentrations, which determine a long term survival of the experimental animal or even until their sacrifice after many hours, usually sacrificed animals are introduced in the ether atmosphere. (Ascione P. J., 1978)

**Experimental study**

An experiment was made on 125 rats of Spragne-Dawley specie. The total number of experimental animals was divided in groups of 5 adult animals, including both sexes: males and females. The weight of the experimental animals was ranging from 140 to 230 grams. Temperature of the environment was between 20-22 °C and atmospheric pressure of 759 ±4 torr. All the parameters were maintained constant during the experiment. The animals had a standard diet and received water ad libitum.

We verified the value of LD50 for each substance used in the experiment (LD is the Lethal Dose of the substance, LD50 of Ethyl Alcohol = 7060mg/kg; LD50 of Diazepam = 1200mg/kg). Afterwards, each of the substances were injected intraperitoneal in doses less than LD50, and after 10-15 minutes was administered as intraperitoneal injection of the other substance in doses less than LD50. When the experiment with Carbon Monoxide was done, the experimental animals were previously injected with one of the studied substances in doses less than LD50 and after 10-15 minutes, were introduced in a CO atmosphere, using a device specially manufactured for the study and completely isolated from the environment. In the device were introduced different concentrations of CO, previously determined and maintained constant, all in doses less than LD50 (e.g. CO 1‰, concentration less than 1/500). When the experiment was completed using all the three toxic substances were administered to each animal as intraperitoneal injections combined doses of the studied substances. There were administered different doses of the combined substances and 10-15 minutes later were introduced in CO atmosphere, which was administered in different concentrations but maintained constant during the experiment.

If we consider the value of LD50 equal to one, the summation of the administered doses in most of the experiments was less than one.

In the same time were administered the same doses separately to other groups of animals. We also used a witness group (to which no toxic substances were administered) and were sacrificed in ether atmosphere for comparative studies.

During the experiment we observed the reactivity of the animals until their death or their sacrifice. After the death, we look biological proves and fragments of organs for histopathologic examination.

We also observed the effects of the combined substances and determined the type of synergism.

**Results and discussions**

1. Reactivity and Mortality of the animals.

During the experiment animals showed a general state of depression. Initially we observed a motor agitation and then a severe reduction of the spontaneous motor activity, and then we observed hypotonicity, non-dynamic, and then coma.

In the case of CO intoxication we observed repeated convulsions before the death and in the case of Ethyl Alcohol intoxications were registered in urine and fecal losses. Diazepam determined a state of calm coma determining non-dynamic state of the animal.
These effects were more severe when used combined doses of toxic substances. Death occurred earlier, when the administered doses were increased.

Mortality of the animals was about 70%, using the doses less than LD50 and injecting two of the studied substances or even all three of them. The rest of the animals were sacrificed in ether atmosphere after 6 hours. During the experimental study we observed thanatogenerator mechanism in case of acute intoxications induced by competitive factors. On the other hand, we recorded 30% of surviving animals which had a single substance administration in doses less than LD50. The animals intoxicated with CO died an a short period of time, if used in high concentrations (at about 20-30 minutes using concentrations less than 1/300), as well when used in combination of CO with another toxic substance or when used combination of Diazepam with Ethyl Alcohol. When Ethyl Alcohol and Diazepam were administered separately, death was recorded after prolonged state of coma of about 2 to 5 hours.

2. Biological samples collected.

We studied the following biologic constants: Hemoglobin, Glycemia, Creatinine, Glutamic Pyruvic Transaminase, Amylase, Creatininekinase, Potassium, Alcohol Blood Level and Carboxihemoglobin.

In the experimental studies we recorded diminished values of Hemoglobin comparatively to standard values of CO intoxications. In all CO intoxications, administered alone or in combination with another toxic substance we recorded high levels of carboxihemoglobin, being as high as 83%-92%. We can conclude that death occurred due to this thanatogenerator factor in all studied cases. The short time of survival was determined by combination with another toxic substance.

Ethyl Alcohol intoxications determined low Glycemia and increased values of GPT and Amylase. Alcohol Blood Level recorded after death had values from 4,5 to 5,5‰ grams.

Diazepam induced increased values of Creatinine and GPT.

Combination of the studied toxics produced severe modifications of the studied biologic constants.

3. Histopathologic findings.

We found histopathologic changes in the brain, myocardium, liver and kidney. The intensity of these changes is dependent of the administered dose, being more obvious when higher doses are used and also when used combination of toxic substances. These histopathologic changes in the above mentioned organs are considered thanatogenerator factors.

At deceased animals from the CO intoxications we found:
- at the cerebral level – small perivascular extravagated hematias, small focal hematias under the pia mater and/or intracerebral (found mostly in the white periventricular substance);
- at the pulmonary level – hyperemia, focal acute emphysema, small extravagated hematias, reduced intraalveolar edema;
- at the cardiac level – extravagated hematias in perivascular area, intravascular hematic thrombi, myocardial fibers necrosis;
- at the hepatic level – hepatono-nuclear dystrophy, small focal hemorrhagic spots in the pericentral lobes area;
- at the renal level – dystrophic lesions.

At animals dead from the Ethyl Alcohol intoxication we observed:
- at the cerebral level – edema and small extravagated perivascular hematias;
- at the pulmonary level – pulmonary hyperemia and acute pulmonary edema;
- at the hepatic level – hepatic degeneration with necrotic areas;
- and congestion at the level of all internal organs.

At animals dead from Diazepam intoxication we found:
- at the cerebral level – hypertrophy and hyperplasia of the glial cells, hemorrhages under the pia mater;
- at the hepatic level – hepatic dystrophic lesions;
- at the renal level – dystrophic lesions.
  In the case of intoxications induced by competitive thanatogenerator factors, the histopathologic lesions were more severe.

Brain – intravascular thrombus, cerebral edema, and extravasated perivascular hematic. Death by alcohol poisoning, diazepam and CO (HE, x 400)

Brain - hematic clots choroid plexus of lateral ventricles in. Death by alcohol poisoning, diazepam and CO (HE, x 400)

Lung – acute pulmonary edema and outbreaks of acute pulmonary emphysema. Death by alcohol poisoning, diazepam and CO. (HE, x 400)

Heart – necrobiosis dystrophic lesions and increased miofibrilare unifibrilare. Death by alcohol poisoning diazepam and CO. (HE, x 400)

Liver – fatty lesions hepatocyte dystrophy. Death by alcohol poisoning, diazepam and CO (HE, x 400)
Conclusions

1. The experiment proves that intoxications induced by thanatogenerator competitive factors are producing changes in the values of the biological constants and pathologic changes are found to be more serious at the level of parenchymatous organs, unless is administered just one of the thanatogenerator factors. Combination of toxic substances produces severe toxicity in the living organism.

2. The clinical evolution of the animals was directed in coma and occurred faster when were administered two or all three toxic substances. Also, mortality of the animals was increased and death occurred in less time in intoxications induced by thanatogenerator competitive factors. When the same doses of toxic substances were administered to the animals in single and separate doses, death rate was reduced even though doses of LD50 were administered.

3. Ethyl Alcohol and Diazepam toxicity was found reduced if administered separately. When used in combination in doses less than LD50, it produces a strong toxic effect, leading to serious and then lethal intoxication. The findings are related to clinical observations in the Emergency Room when intoxications with Benzodiazepines are treated. Usually, Clinical Toxicology is not dealing with acute, severe and lethal intoxications with Benzodiazepines, because their therapeutic indicator is very good. But their combination, Diazepam with Ethyl Alcohol or Diazepam with Carbon Monoxide are producing severe, strong and lethal effects. The risk might be greater if the alcoholics use self-medication.

4. Carbon Monoxide Toxicity is more serious comparative to other two toxic substances, the lethal effect is greater, even doses less than LD50 are used and in single administration. When is administered in combination with another toxic substance mentioned above, is found a severe transportation and utilizing asphyxia produced by Carbon Monoxide and in the same time is produced by the second toxic substance a depression of the bulb’s respiratory centers. The examination of the blood revealed a very high concentration of carboxyhemoglobin, which proves that Carbon Monoxide is the main thanatogenerator factor inducing death.

5. Based on the experiment, we strongly recommend a careful examination and treatment in intoxicated patients with more than one toxic substances which may act in synergism or by competition as competitive thanatogenerator factors.

AIV. Research and contributions in other fields, related to the forensic activity

AIV.1. Research in the legislative field; Malpractice and medical deontology

The medical activity is a very complex activity that involves not only a serious preparation, information and continuous improvement, and also a correct application of the acquired knowledge, but also liability for the activity that was done.

In this debate, we try to mark the limits between the deontological liability, malpraxis and the legal medical liability, starting from the information presented above (Belis V., 1992).

For a better understanding, we thing that it is helpful to answer to some questions such as:
What is the medical ethic? What is the medical deontology? What is the medical liability? What is the malpraxis? When do we have medical error? When do we have culpability? What is the civil liability in the medical field? What about the penal one? What point can we extend the deontological liability to and where does the legal liability of a doctor start from?

We are beginning by defining the ethic as being the science that studies the theoretical and practical matters of moral. The term deontology, being the moral of a profession, was first introduced in this field by the British philosopher I. Bentham.

The moral-behavior rules have existed in the medical field from the ancient times and they have become medical deontology in time (Belis V., 1995). This fair practice is used in the patient - doctor relation and also in the doctor-society relation.

The definition regarding the liability can be defined as being a reaction to a social deed that the society condemns. The medical liability results from the peculiarities of the medical profession and also from the unforeseeable and irreversible development of the medical act (Trif A. B., Astărăstoaie V., 2000).

It is of great importance to mark the differences between the moral (deontological) liability and the penal one in the medical practice.

The public opinion and the professional conscience are going to sanction the moral deviation of the doctor. The Medical Board is the one that usually analyses such deviation, solving the problem according the rules of this institution. This institution only sanctions the deviations that have broken the moral medical rules; the legal deviations are being sanctioned by the competent institutions (Police, Prosecutor’s Department). When according to the law there is the possibility of using the constraint of the state we deal with the legal medical liability (Trif A. B., Astărăstoaie V., 2000).

According to the legal standard that has been broken, the legal liability can be:
1. Administrative liability (involves disciplinary and civil penalties)
2. Civil liability (is sanctioned by the Civil Code and in general it refers to the patrimony assets – goods, money). This term concurs with the medical malpraxis term.
3. Criminal liability (it is sanctioned by the Penal Code and it is formed out of serious antisocial deeds named perpetration).

The difference between error and medical culpability is of great importance for determining the medical liability as being a moral or a criminal liability. For a better understanding of the two terms it is necessary to understand the term of malpraxis (Belis V., Gangal M., 2002).

The b. letter of the 642 article of the 95/2006 Law stipulates: malpraxis is the professional error committed during the medical act or medico-pharmaceutical act, error that causes damages to the patient, involving the civil liability of the medical staff, of the provider of medical, sanitary and pharmaceutical facilities and products. The definition tells us that in order to have a malpraxis situation there must be proved that an error happened during the medical act. What is and what can be considered to be a medical error? The answer is not an easy one.

The error can be defined as being an unpredictable failure of a normal medical behavior. The error is related to the knowledge field, tiredness, the lack of the doctor’s psychological balance, the lack of the medical experience. It is an accepted possibility and it does not draw the doctor’s criminal liability.

The medical errors are divided in two categories: objective and subjective (Trif A. B., Astărăstoaie V., 2000).
The objective error is the result of imperfection (exhaustive acknowledge) of a medical aria. The medical aria can be an etiological agent, peculiarities of the illness, a certain reaction of the patient, applied treatment, complications that may occur during the evolution, etc. No matter how well prepared a physician is, in such a situation they would all commit an error reacting the same way. This situation is legally considered to be de facto error, and the situation caused by it does not draw the criminal liability, but the civil liability. Nevertheless, the patient can consider the restoration of damage if he had suffered damages and accuse the doctor or the system of an error. Certain technological imperfections or limits of the medical devices needed for clinical and preclinical tests are part of the objective error category. In this situation the physician cannot be held countable for the error, but the institution (hospital) that bought the device can be held countable.

The subjective errors are committed because of the poor professional preparation which leads to a false representation of the medical situation. For the same reason (poor professional preparation) the technical methods and specialty maneuvers can be wrongfully used. These refer to: surgeries, drug treatment, manoeuvres need for tests, the technique of taking care of the ill person, etc. In the same given conditions a different physician, a well prepared one could avoid causing damage to the patient, damages that could be caused by inability, superficial appreciation of the case, inaptness or omission doubt, etc. These are all part of the diagnosis errors field and they are based on improper examination, symptoms improperly interpreted, unawareness of the patient’s antecedents, not sending the patient for interdisciplinary checkups. The subjective errors draw the medical liability that can have civil or criminal consequences.

Making the difference between the subjective and objective errors is not easy, but it can be done if the real work conditions that the medical staff had at hand are being analyzed. “Medical staff” is defined by the latter a, first point, article 262 from the 95/2006 Law: “the medical staff/personnel is formed out of the doctor, dentist, pharmacist, nurse and midwife that offer medical services.” In order to mark the difference between the objective and subjective error committed by a doctor, it must be analyzed weather it was done everything possible in the given conditions to set a good diagnosis and choose the best treatment method or not, and if the doctor used all his knowledge and professional experience. If the doctor’s professional attitude was irreproachable, but still there was an inconsistency between the diagnosis and the real situation, then the objective error might be caused by the improper work conditions that happen during running a high quality medical act. In the given conditions a different doctor would have ended in the same situation committing an objective error. Also, we can consider objective error when there is an inconsistency between the clinical diagnosis and the objective reality in the cases, given by the unusual symptomatology generated by a certain reaction of the patient or by different agents that influences the evolution of the disease. The doctor is going to be charge of committing a subjective error if the diagnosis’ inconsistency is given by the doctor’s lack of professional information or by using the information without diligence.

That is way it is good to present the text from the 642 and 642 articles part of the 95/2006 Law.

Article 642 - (2) The medical staff has civil liability for personal acts that produced damages caused by errors, which include negligence, imprudence or insufficient medical information that happened during practicing the prevention, diagnosis and treatment procedure.

(3) The medical staff has civil liabilities in case of damages that are caused by the disobedience of the stated regulation regarding the confidentiality, informed agreement and the obligation of giving medical assistance.

(4) The medical staff has civil liabilities in case of damages caused while practicing the profession, even when the limits of their competence are exceeded; exceptions are made when the appropriate medical staff is not available in a case of an emergency.

(5) If the act that caused the damage is according to the law a crime then the civil liability does not remove the criminal liability.
Article 643 - (1) All persons involved in the medical act are proportionally liable to their own level of guilt.

(2) The medical staff is not liable for the damages and torts caused during practicing the profession when: a. they are caused by the work conditions, insufficient diagnosis and treatment equipment, nosocomial infections, side effects, risks and complications generally accepted, investigation and treatment methods, hidden flaws of the sanitary materials, equipments and medical devices, used medical and sanitary substances; b. in case of emergency they act with good faith according their competence.

The malpraxis can be part of the following categories:

1. Civil malpraxis – is the consequence of breaking some basic rules that can be classified the following order:
   - the responsibility of treating and answering to emergencies
   - applying some standards of caring (maximum and minimum)
   - to make the best judgment
   - the duty of care practice
   - the duty of constant improvement
   - the duty of obtaining the patient’s agreement
   - the appliance of proper diagnosis procedures
   - the abandon of the treatment
   - confidentiality
   - the superior’s liability (every negligence committed by the employees equally involve the superiors – the chief doctor)
   - the trust relation between the doctor and the patient

2. Criminal malpraxis – the acts in this category can be fraud, documents alteration, illegal use of medication, illegal or criminal treatments (to induce an abortion), breaking the oaths, causing body injuries, infirmities or invalidities. When the death of the patient is a consequence of one of the above, the guilty one can be charged with murder (C.C).

3. Ethical malpraxis – the medical staff is acting following the ethical and conduct standards and also a mandatory conduct code for all those participating at the medical act: doctors, dentists, pharmacists, nurses and midwives. The rules of this code are part of the Code of medical faire practice. Disobeying these rules can indirectly affect the doctor-patient relation by lowering the quality of the medical act; the problems are analyzed and solved by the board that has the medical authority (Medical Board).

In real life the most frequent malpraxis situation is the one that has civil consequences. That is why there are the malpraxis insurances. According to law, each doctor must be insured at an insurance company. The insurance company pays the patient’s damages, if a trial or a decision of the newly formed judging commission proves that the objective reality complies with the malpraxis situation.

Medical fault represents the breaking of a minimum of attention and prudence professional liability. It is considered that it wasn’t fulfilled a liability or an act that had to be fulfilled and that there was an abnormal conduct that in similar conditions a different doctor with the same preparation would have not used (Belis V., Gangal M., 2002).

To consider as fault a medical mistake, it must reach some conditions:
1. it must be obvious, material, proven
2. it must exist beyond any doubt
3. it must be the consequence of the lack of professionalism
4. it must be considered mistake by other competent doctors

In order to judicially charge a medical fault there must be a physical or psychological harm guilefully done and there must be causality connection between the deed and the damage. In conclusion, the definition of medical fault contains:
1. the existence of a professional duty
1. The professional fault through ignorance (incompetence, inability, lack of knowledge) – is present in the diagnosis or in applying the treatment if the doctor performs the medical activity without having the needed information or having a false information. Generally it is accepted that ignorance is the doctor’s important mistake. It can be criminal in emergency cases, being fatal for the patient.

2. The fault through improvidence (imprudence) – means committing a positive medical activity without foreseeing that illicit consequences might appear, even though it could have and it must have been foreseeable. Every professional, when performing normal professional provisions, must make the proper decision for each situation according to the real possibilities of provision that he is specialised in and according to the professional experience.

3. The fault through negligence (inattention) – the legal conditions of charging the negligence include:
   - not acting as any reasonable person in same working conditions and in the same situations
   - not avoiding a professional act that any other good faith professional would have in the same conditions
   The forms of manifesting the negligence are: haste, superficiality, fulfilling the right duties unconscientiously.
   The following acts can be considered negligence: taking incorrectly the case history (the lack of dialogue with the patient), an inaccurate clinical test (a patient that is checked with the clothes on), not performing some preclinical routine tests, not taking some asepsis measures before the surgery (Trif A. B., Astărăstoae V., 2000).

4. The fault through indifference (carelessness) has the following conditions:
   - the author of a certain action or inaction, knows that all the measures of protection were not taken, but hopes to avoid the unfavourable result of his activity.
   - the negative results cause the patient a damage that is related to the doctor’s indifference.
   Methods of the indifference are: under appreciation of the risk of the medical action or over appreciation of the means of action.
   In order to exclude a medical fault and to take in consideration the unhappy case the forensic expert and the Court must prove that:
   - the good faith of the doctor that tried to do everything that was possible for the good of the patient.
   - all the medical means were correctly used
   - all the medical conduct rules were followed related to the real work situation
   - the patient agreed for all the performed manoeuvres
   - an interdisciplinary consultation was done when needed.

What happens in an emergency when the life or the health of the patient is endangered? How would the doctor be held countable for such a situation?

It is good to know, that in such a situation, the success depends on the doctor’s preparation, which means that the doctor must have information about cardio-respiratory resuscitation, must have information about the emergency treatment that needs to be personalised from case to case. The success also depends on the organization and transportation of the patient to the closest medical facility (Belis V., Gangal M., 2002).
According to the 3/1978, the doctor cannot deny an emergency no matter the hour that he was solicited or the patient’s address. The doctor must answer the solicitation and offer the first aid even outside the working schedule, exception are made during a force majeure case. Not answering to a patient’s emergency call is charged by the law, so it represents a mistake. The refusal is considered by the law commission through omission and is punished by the Penal Code according to the grievous damage that was caused (184 Article Penal Code). If the patient dies the situation is considered to be culpability murder through omission (178 Article Penal Code).

For the cases presented above, the doctor is exempted by the liability (he would not be held accountable) only in circumstances outside one’s control.

As a conclusion to all the above, it can be said that a good quality medical assistance clearly the level of preparation of a medical assistance system. It also shows the way the society puts price on a life and the difference between theory and practice in the medical profession.


Starting with 2000, Romanian legal institutions have begun to apply modern legislation adapted to the current times and requirements arising from the forthcoming accession of our country to the European Union.

Old Decree 446 of 1966 was replaced by OGR no. 1/2000. The Regulations and the Implementing Rules, respectively Law no. 459/2001. All these were later supplemented with GO no. 57/2001 and Law no. 271/2004.

We will only refer to the difficulties and malfunctions in the application of current legislation at the level of the county legal medicine departments and we rely on the fact that these occurred and accumulated in more than five years of everyday practice. It is up to those working in the legal medicine institutions to report the problems they have in implementing the new legislation. The purpose of this paper is not to criticize the current legislation that has been proposed and drafted by legal practitioners and is basically modern and good, but to improve it.

A first aspect is related from the administrative point of view to the dual "biomaterial" membership, the county administration of legal medicine and the staff structure at the county hospital but under the control of the Public Health Directorate. When the relationship of the legal medicine service with these institutions is good, no tensions arise, but when legal medicine requires a legal service to these institutions, each has the first reaction a refusal, derogating from responsibility or more correctly passing through the responsibility. (Mihalache G., Buhas C., 2007) Only after great efforts and insistence that lasted for some years the legal medicine services managed to separate their own income account and expenses from the account County Hospital. Large sums of income from legal medicine services have been spent illegally by hospitals, but they have never given money to county legal medicine services simply because the source of hospital funding is the Health Insurance House with which no legal medicine has contract. When the individual income account was individualized, it was not different from that of the county hospital, and the money spent was heavy on the basis of endless necessities, which led to long delays in the purchase of goods. When the investments were under discussion, the county medical service was included in the hospital's annual investment plan with even greater problems in the efficiency of their purchases and their quality. For example, it was not possible to purchase the chemicals needed by the toxicology lab within the county legal department service if they did not acquire the hospital's laboratory at the same time as other chemicals they needed. For months, the hospital had no money, so nothing was bought, but the legal medicine service had money but could not make the purchase. The same happens with office equipment, vehicles, instruments and specific medical equipment.

As a proposal to solve this malfunction is the transformation of the county legal medicine services into institutions with legal personality able to collect and use the funds directly through another institution.
Another aspect that we would like to highlight is the lack of feedback in the collaboration of the County Law Offices with the Institutions of Forensic Medicine, to which each county is assigned, respectively with the National Institute "Mina Minovici" through the systematic and total refusal of communication the result of the opinions or the new forensic expertise that I do with the forensic documents originally issued at the level of the county legal medicine departments, although in the OGR 1/2000 it is mentioned in the chapter. Article 24, paragraph 3, states that "the opinions of the higher-level medical commission shall be sent to the applicants within maximum 40 days from the date of the request and shall be communicated to the legal medicine units that have given their opinion in the respective case". Communicating results and better collaboration with methodological tools could lead to an improvement in the quality of forensic medicine in the sense that a forensic doctor who has committed a mistake in writing an act about her does not repeat it.

Law 459/2001, at head. M, art. 7, letter D mentions that "the county legal department performs new forensic expertise, except for those that fall within the competence of the legal medicine institutes", in fact, some courts require various medical-legal acts directly to the institute of legal medicine to which the county service belongs without going through the legal steps that would lead up to that point. For example, a county legal medical service carries out a forensic finding that comes as evidence in the court, and it requires a case study of the institute of legal medicine to which the county belongs. Another example is when the county service carries out a finding, then an expertise, and the court asks for new expertise to the legal medicine institute. In this situation, the only correct, legal, and ultimately deontological answer from the Institute of Legal Medicine to the court is to address the county medical department. Exceptions would be only in objective situations in which there are some county medical services that can not carry out new expertise due to lack of personnel, but this is not the case with SJLM Bihor, where the staff covers the whole range from a professor to a university assistant and is more than in many legal medicine institutes.

Regarding the Forensic Expertise for postponing or interrupting the execution of the punishment for medical reasons, according to the methodology, at the level of the county medical service of forensic medicine can be carried out two expert examinations, each of which may set a period of postponement / interruption of the penalty between 1 -3 months. However, there are incurable diseases such as metastatic cancers in which the delay of 3 + 3 months is incorrect, the evolution towards the worsening of the symptomatology or the death of the patient is clear. We propose that for such serious, incurable, high-risk lethal diseases, where the patient is often difficult to carry, to bring about a change in methodology in the sense of clearly establishing that "the patient does not tolerate the detention regime" On the occasion of the first examination carried out at the level of the county medical department of legal medicine.

Regarding psychiatric forensic expertise Law 459/2001 states that "this expertise is carried out at the headquarters of the Legal Medicine Institutions with ... certain exceptions". We believe that this is hard to do in terms of location within the County Medical Service and for all cases it is much better to do in the psychiatric hospital.

Regarding the retrospective calculation of alcoholism, it is discriminatory and incorrect to do so only at the Institutes of Legal Medicine as long as some county legal medicine services have at least the same qualifications as the institutes (primary doctors, chemists, pharmacists, biologists).

Although we do not consider the difficulties and malfunctions exhausted regarding the application of the new legislation in the forensic field at the end of the paper, we will refer to another issue left unresolved, namely the remittance of the legal medicine staff. This way, it should be remembered that the legal provision regarding the fact that the salaries of forensic doctors and legal medical staff should be 100% higher than the medical staff of other services do not apply in practice; Some counties have come to unpleasant situations in which the legal practitioners acted in court the leadership of the county hospitals they belonged to regarding this situation and the result was as expected: the sentence the court gave benefitted the doctors. One
example is that of Arad County where the court ruled that lawyers were wronged to pay more than 1 billion lei.


At any level, in forensic institutions in our country, forensic documents which are based on various medical documents are carried out. These can be studied in original or in photocopy. (Cocora L., 2003)

Any forensic doctor has the feeling of starting "left" in drafting a forensic act when presenting clinical observation sheets, medical letters, medical certificates, health cards, etc. written by hand.

Most often writing is illegible, from which the forensic doctor tries to reconstitute the contents of the document based on a few words, which he has deciphered. His effort is great and sometimes the result is doubtful. (Dermengiu D., 2002)

*Proposal:* in any way, we must insist that all medical documents be edited, as they have been for years in neighbouring countries. Practically, outside of the doctor's signature, there is no handwriting on any medical act.

What we did: In most cases when I was unable to decipher the handwriting, I asked the physician officially and in a standardized format, to transcribe the medical document he had drawn up by invoking the regulation on the application of the provisions of OGR 1/2000, chapter V, art. 40, 41, 42, entitled "Relations of Legal Medicine Institutions with Other Health Units".

Once the obstacle of deciphering the observation sheets is over, we find their precariousness.

We recall the most common deficiencies but also the way we tried to fix them (Mihalache G., Buhas C., 2007):

- The examination of traumatized patients at hospitalization regardless of the mechanism of producing of the injuries (aggression, traffic accidents, domestic injuries), is very brief regarding the correct description of the injuries.
- Basic biological parameters are often noted formally, such as: AT 130/80, pulse 75, temperature 37, inconsistent with the diagnosis from admission (traumatic and haemorrhagic shock).
- Automatism in the marking of the objective exam on devices, such as: nervous system - OTR present bilaterally in cranial traumas with intracranial hematoma or psychologically-oriented auto and alopyschic examination in the diagnosis of coma, etc.
- Non-interpreted para-clinical investigations but found in the observation sheet: X-rays, EEG, EKG, etc.
- Absence of para-clinical investigations to confirm the clinical diagnosis. A common example is the diagnosis of mean cerebral contusion, usually unsupported by para-clinical investigations or by the clinical picture.
- The absence of completion of some fields, most often the operating protocol, when the patient has undergone various surgical interventions.
- Omission, of course intentionally, of noting some events during hospitalization (bed drops, drops in the salon or in the dining room or bathroom, suicide attempts), and we believe that is very important to note events that may have legal consequences, such as Example drawing up and signing moods in the presence of the notary.
- Noting the evolution of a formal character, such as "stationary or for improvement or worsening", without telling what this development actually is.
- Medication is noted in the medication sheet, but only by exception is the additional medication obtained from sources other than the hospital pharmacy. Alternative treatments are also not noted.
- Establishing some "possible" type of diagnosis when discharging the patient from the hospital.
Epicrisis is not the mirror of patient evolution during hospitalization but rather a poor synthesis of the patient's condition from admission to discharge or death.

Informed consent is still formal in the form of a handwritten document with often an illegible signature and a stereotyped content such as "I agree with the operation or treatment I will be subjected to."

In trying to remedy these deficiencies of the observation sheet we proceeded as follows (Florian S., Mihalache G. 1999):

- Official address to the director of the medical institution or head of department where the sheet came from asking for a professional analysis of the case and to draw up a specialist report that would meet the objectives that we could not find in the observation sheet;
- The composition of an observation sheet analysis board for various specialties, such as the interpretation of radiographs, electrocardiogram, ultrasound, CT scan or analysis bulletins;

A major problem with medical records is that, for the most part, they contain medical data strictly related to the condition for which the patient is hospitalized or treated. For example, in a OS from orthopedic department, regardless of the age of the patient or his associated diseases, we only find data about the posttraumatic injury for which he was hospitalized. From an oncology OS we can learn a lot about the form and stage of the cancerous disease the patient has, but nothing or almost anything about other affections. The consequence is as follows: If we are asked about the possible psychological suffering of the patient, or if he or she had the discernment at that time, or if his or her affection in some way affected various professional skills, we are virtually unable to respond based on a criteria of objective medical reality.

A particular kind of difficulty in drafting forensic law is the collaboration, bad collaboration or even the refusal to collaborate with colleagues. (Astarastoae V et al., 1993) In the psycho-legal and psychological expertise of labour capacity, the solution of a good collaboration is to set up a team to function in the same composition on the same day and at the same time for a long time. If all the team members are paid for the hard work even with modest amounts it is all better and we have succeeded in doing so. Problems arise in interdisciplinary consultation, especially when doctors work in private clinics and discuss the payment of the examination fee. Legislation in this area is cumbersome and difficult to apply. Obtaining the signature of a physician who has undergone an examination for forensic expertise is also a problem sometimes, although he must be reminded that, according to the methodology for making the act, he only signs for diagnosis and treatment. Which prescribed it and not for the conclusions of the forensic act (Belis V., 1995).

A more delicate aspect, which is also surpassed, is that when we need an unjustifiable objection to an injury through an X-ray, ecography or CT investigation, we are told that the clinical examination is sufficient. (Cocora L., 2003) The reference to the text of the law, but made in writing, officially under signature is sometimes the only way we overcome this obstacle.

Regarding the official relationship with the beneficiaries of our activity, that is, the police, the prosecutor's offices and the court of law, which sometimes are negatively affected, we propose the following way of working: at any address, even if they are clearly defective, of the proposed term, with the objective motivation of the impossibility to carry out the requested work or logically explaining the steps to be taken in order to finally achieve the correct work. (Dermengiu D., 2001)

Examples:

- when the police request to carry out an expert's report on several road accident victims for example, it is immediately answered that they must issue a writ for each victim with specific objectives appropriate to the person concerned (driver, passenger, pedestrian, etc.);
- when the court is required to perform a forensic expertise and only a clinical observation sheet is sent, the case file is immediately requested in writing, on the grounds that this is in line with the methodology for conducting the expertise.
- when asked to answer non-medical questions, it is replied that the objectives need to be reformulated in accordance with the Code of Criminal Procedure.
- it is required when completing a forensic medical certificate or a forensic medical report and these are multiple and complex, it is answered that it is necessary to carry out a forensic examination and an address is requested in this way.
- when requesting a supplement to a forensic report after an autoresponder, it is necessary to answer that it is necessary to have a forensic expertise report.
- when we are asked to answer the questions from lawyers in the addresses received from the court, we must suggest that they should be selected by the judge and only those related to the case should be made and are not obviously biased. Moreover, there is no need to answer the set of questions asked by each lawyer, that of the victim and the perpetrator (aggressor, driver, etc.)
- any hospital displacement to examine a patient should be done only when we have an address with the objectives formulated because it is now well known that the police, in particular, promise they will issue the address after the examination but do not do it when it turns out that the injuries are small, require less than 20 days of medical care or do not endanger the life of the victim.

Ultimately, the basic idea is that for a proposed term of forensic work there must be an answer of any kind, even if for the term in question I did not have the objective possibility to draw up the work, but that must be explained. By doing so, we avoided the embarrassing situation of receiving fines from the court.

AIV.2. Research in the field of medical and forensic paraclinical investigations

AIV.2.1. Disposal of unused medicines resulting from home treatment in Romania (Journal of Environmental Protection and Ecology 17, No 4, 1425–1433, 2016, pp. 1425 – 1433)

Unused pharmaceutical compounds and their degradation products that are inappropriate disposed of are a source of pollution of the environment with negative impact on human health, as well as on solid and aquatic environment. The present study is an assessment of compliance with the law standards concerning the final disposal of pharmaceutical wastes resulting from home treatment among the population from western part of Romania, namely Bihor County. A total of 739 people were interviewed by using a questionnaire in order to evaluate their health status, the way of using and storing medicines and the disposal methods of the expired, unwanted or unused medication.

The results revealed the level of public awareness regarding the legal disposal methods and destruction of the pharmaceutical wastes and the urgent need of public information campaigns (including educational campaigns for implementation of cost-effective and optimum unused pharmaceutical disposal strategies) that are nowadays totally insufficient and could be performed, for example, by the specific staff from the pharmacies and as well by the presence of informative advertisements in pharmacies. Proper management of pharmaceutical wastes will mitigate the potential of the disposal problems and will have a positive impact on the environmental and human health.

AIV.2.2. Lethal acute intoxication with methyl alcohol; forensic and legal aspects (The 7-th European Academy of Forensic Science Conference, september 2015, Praga, Czech Republic, Abstract Book, Forensic Medicine, Legal Medicine and Forensic Pathology, pp. 718)

This paper presents a 3-years period casuistry of the Forensic Service in Oradea - Bihor, Romania. This county has a population of approximately 350,000 inhabitants with a very heterogeneous ethnic and religious population (Romanian, Hungarians, Slovaks, Roma, etc; Orthodox, Catholics, Neo-Protestants, etc). For this reason, it can be considered a representative sample of the forensic casuistry in Romania.
Material and method: All cases of lethal acute intoxication with methyl alcohol were analyzed; the following items have been considered: age, sex, ethnicity, professional training, the product containing methyl alcohol, whether or not the victim was hospitalized.

The result of the analysis and forensic investigations indicated relevant legal and epidemiological aspects. It was possible to identify the products containing methyl alcohol and the conditions that led to the misuse of these products.
SECTION B

BI. Professional contributions

My professional career in legal medicine can not be separated from my academic activity in this field because I have always been busy with both students and residents in all the work done in the forensic field. In my opinion, it is essential that students and young doctors acquire theoretical knowledge, but at the same time be aware of their practical application and importance.

I have trained for my residency for four years (1996 - 1999) as a legal medical practitioner and have been working in this field for more than 20 years. I started my work in this specialty after a period in which I was a trainee at the County Hospital of Oradea (1991 - 1992), family doctor at DMC Uileacu de Beiuș, Bihor County (1992 - 1994), and another period of residency in Emergency Medicine at Oradea County Emergency Clinical Hospital (1994 -1996).

After completing my residency studies, I became a specialist in legal medicine and then a primary medical practitioner since 2003. During this time I worked as a legal medical practitioner at County Office of Forensic Medicine Bihor - Oradea. I have worked in legal medicine with professionalism and seriousness. As a recognition of my professional competence in this field in 2009 I was appointed chief medical officer of the Clinical Laboratory of Legal Medicine within the Bihor - Oradea County Medical Service and since 2017 I am the chief physician of this service (SJML Bihor - Oradea).

As a forensic practitioner, I was also a member of the medical examination specialist committee (in 2004 and 2007) and a forensic expert in numerous criminal and civil cases.

To complete my professional activity as a forensic practitioner, in 2006 I completed my studies in law, knowing that there is a close link between legal medicine and law and a good forensic practitioner must have as much legal knowledge as possible. For a most effective coordination of the service where I am a Chief Medical Officer, in 2006 I finished a Master in European Public Health Management. Throughout this time I have done numerous postgraduate courses and have participated in multiple congresses of legal medicine in the country and abroad (Hong Kong, Brisbane, Kuala Lumpur, Tozeur, Dubai, Seoul, Lausanne, Madeira, New Delhi, Lisbon etc.)

BII. Scientific contributions

On December 10, 2004, under the guidance of distinguished Professor of legal medicine Milan Leonard Dressler I supported my doctoral thesis titled "Medical-Legal Implications in Emergency Medicine". My PhD research was one of the first in this field. That is why we later published the book entitled Interdisciplinary Connections between Legal Medicine and Emergency Medicine (Oradea Publishing House, 2006).

In view of my multidisciplinary training, my research interests have focused on two interconnected areas: medicine and law (legal sciences).

Scientific contributions in Legal Medicine

Medico-legal toxicology

Forensic toxicology was an area of interest for study in my PhD thesis. Research in this field was focused on tanatogenerator syndromes through a tanatogenerator factor and by competitive tanatogenerator factors. Of the multitude of tanatogenerator syndromes in the violent
deaths, specific to forensic activity, I have selected those who have intoxication as a mechanism of production. In this regard, I conducted an experimental study on laboratory rats. I studied intoxications with ethyl alcohol, diazepam and CO administered alone or in different combinations and different doses. It is known that both ethyl alcohol and diazepam have an effect on CNS with depressive effect at this level. Under their associated conditions the depressive effect on CNS increases. CO is hematotoxic. Arrived in the blood a small part of it dissolves in the plasma and mostly combines with hemoglobin forming carboxy-hemoglobin. However, in high CO concentrations it causes transport asphyxia (by hematotoxic action) and asphyxia of use by affecting heminic (myoglobin) catalases, oxidases. I have found that CO association with a CNS-depressive toxicant (eg Diazepam, Ethyl Alcohol) causes CO-hypoxia to be potentiated by concomitant depression of the respiratory centres in the bulb under the action of the respective toxins. I have also found that three of the tanatogenerator syndromes occur in death: respiratory failure syndrome characterized by CO intoxication, comatose syndrome produced by CNS-depressant poisons at certain doses of coma administered by suppressing RAS and cortex Cerebral and distal shock disturbances due to vasomotor stroke.

The results of this study can be considered as an epidemiological and medical-legal alarm signal regarding the increased lethal potential of the association between CNS depressants, alcohol and a vicious CO environment.

Starting from this experimental study I also conducted other studies in the field of forensic toxicology that concerned alcohol consumption. I have had several studies on this topic during the postdoctoral period presented at international scientific events of which I mention a few:

1. Buhaş C. L., Mihalache G. C. Lethal acute intoxication with methyl alcohol; Forensic and legal aspects. The 7-th European Academy of Forensic Science Conference, September 2015, Praga, Czech Republic, Abstract Book, (pag 718);

I have also conducted studies on intoxication with other substances that have been presented at international scientific events such as:

1. Buhas C., Mihalache G., Miron A., Buhas B., Pintea M. Methil alcohol used in pharmaceutical products; source of intoxication resulting in multiple victims. 54 – th Annual meeting of the International Association of Forensic Toxicologists (TIAFT) 2016, Brisbane, Australia
2. Mihalache G., Miron A., Buhas C., Olsen M. Intoxication with organophosphate and organochlorine substances utilised for agricultural purposes in two romanian countries; medico-legal and socio-economic aspects. 54 – th Annual meeting of the International Association of Forensic Toxicologists (TIAFT) 2016, Brisbane, Australia
3. Buhas C., Mihalache G., Miron A., Buhas B. Accidental methyl alcohol intoxication; forensic valence and social cultural aspects. The 23-th International Meeting on Forensic Medicine Alpe-Adria-Pannonia, june 2014, Lausanne, Switzerland

Last but not least, I investigated the social and forensic implications of drug use. In this sense, I worked in a team, participating effectively in an international research project entitled
"Light for the White Fog" - an anti-drug education campaign, sharing the cross-border experience, organized by the Association of the International Anti-Drug Center - Bihor in collaboration with Forras Lelk Segitok and The National Anti-drug Agency, between 2006 - 2007, where I held the position of forensic expert.

On the subject of drug use, I presented in 2013 at the Conference "Adictiology in Romania – Where?", organized in Oradea the paper: Drug use and its implications in Medical Forensic Expertise.

In the field of forensic toxicology I have also carried out two postgraduate courses at Cluj-Napoca University Center, namely:

- Technological and legislative facts in forensic toxicological expertise (2014)
- Actualities in forensic toxicology (2013),

Who helped me to improve my knowledge in this area of forensic activity.

Medico-legal thanatology

My research in the field of forensic tanatology is vast and for this reason one of the subchapters of my thesis contains precisely some of my tanatological research. In addition to the studies presented in these papers, I have also researched other information that forensic autopsy can provide. Thus, besides the study of tanatogenerator mechanisms, started from the time of doctoral studies, in cases of survival and admission to a medical unit, I studied the concordance between the clinical diagnosis and the diagnosis of death as a result of the autopsy, as well as the sources of complaints made by the doctors against doctors in case of inconsistency.

The success of my research continued in this area with the fact that I was able to prove without doubt the cause of death in a controversial forensic case, reaching conclusions different from those stated in the initial legal documents, which were validated in law, producing major legal acts: acquittal and release of the aggressor who had been arrested on the basis of the forensic forensic conclusions.

In my research, I have gone from the principle that case studies in legal medicine are valuable educational tools, the presentation of rare cases being highly appreciated. That is why I have studied and subsequently presented rare cases of practice at national and international scientific meetings in order to provide a reliable source of information for other specialists in the field.

In addition to the over 60 papers published in ISI journals or presented at international scientific events in Europe and Asia, on forensic activity on the corpse, besides the written courses for medical and law students, I also wrote other books / chapters in collective volumes on this topic whom I am convinced that they have also contributed in this field. These are:


In addition, I have studied, even within the doctorate period, the forensic issues related to the transition from life to death (terminal stages of life). My research in this field materialized with the writing of chapters in collective volumes, namely:


Medico-legal psychiatry
Forensic psychiatry is a special field, important in legal medicine. My research in this field has been extensively exposed in the first chapter of the thesis, which relates to postdoctoral scientific research.

It is the field of legal medicine in which I have done a lot of studies because I have been involved in two psychiatric forensic expertise committees (from Oradea and from Ştei Hospital) I have examined and studied many medical and social cases (Social adaptation of post-admission psychiatric patients to PC 110, social danger, social support).

Thanks to my major involvement in this field, in the idea of my improvement, I have effectively participated in a research project entitled "European Standards for Competitive Postdoctoral Training Courses in Advanced Research Management and Forensic Psychiatric Expertise."

The many results of my research in this field have been published in ISI and BDI indexed journals and have been presented at national and international scientific meetings, as indicated in the list of publications attached to the thesis.

Medico-legal traumatology
I can say that the concern for traumatology was before I started my career as a medical practitioner because I have spent two years in the field of emergency medicine, a field where trauma issues are at the forefront. Taking advantage of the professional accumulations at that time, my doctoral thesis also focused on traumatology issues.

The traumatological aspects of intra-family violence were a predominant field of scientific research, as is also apparent from section AII of the thesis. Thus, in the introduction summary of my thesis, I have been involved in this field with interventions in TV programs, the press and various conferences and symposia focused on the issue of domestic violence.

The theoretical accruals gained during the national training on human trafficking that I made in Bucharest in 2015 entitled "Improving medical services for victims of human trafficking" contributed to the completion of my research in this field.

However, the published articles were adapted to the dynamics of the events that resulted in victims of violence of any kind, as well as the traumas acquired under different circumstances. Thus, some of the articles refer to road accidents, domestic accidents, work accidents, death-related blows and another to intra-family aggression.

Medical liability
Medical accountability is a topical issue in progressive dynamics over the last period of time. Thus, knowledge in this area is essential for healthcare professionals.

Personally, I have been actively involved in this field as well. I also managed to do this because of the fact that I graduated from the second faculty in the field of law (faculty of law - graduated in 2006). Thanks to my involvement, I have gained national recognition by being a member The Malpractice Commission within the Bihor Public Health Directorate since 2011 and in the Department Director of the Department of Professional Jurisdiction of the Bihor College of Physicians in 2016. I am also Secretary of the Commission of Health from the Municipal Council of Oradea, a situation where I can get to know and make "lege ferenda" proposals in the sanitary field.

The research activity in this field materialized from the beginning of my research activity through a chapter in the doctoral thesis that deals with the legal and deontological responsibility of the reanimating physician. Postdoctoral I continued this activity having published several scientific papers in national impact journals, indexed by BDI or presented at different scientific events, but also at international scientific events (Hungary) where I presented the paper: Malpraxis versus medical disciplinary responsibility; current law in Romania.

In order to improve my knowledge in this field in 2015 I graduated from UMF Iaşi a postgraduate course titled: Professional Responsibility in Medicine - From Ethics to Legislation.
Medical aspects of organ transplantation
The research in this field began throughout the doctoral period, in the doctoral thesis having a chapter titled "About organ transplantation from the deceased donor; proposed by the law". Previously, I continued my research on this subject with studies that materialized through papers presented at scientific events. I recall two of the recent papers on the subject:


2 Mihalache G., **Buhas Camelia**, Mekeres Florica, Buhas B. *The forensic and legal conditions relating to the procurement of organs for transplantation*. XVI-th International Seminar on Medicine and Theology "Resacralisation the physician-patient relationship", may 2017, Bistrita, România

BIII. Academic contributions

My academic career started in 1997 when I entered as a university Associate Instructor at the Department of Legal Medicine, Department of Anatomy, Faculty of Medicine and Pharmacy, University of Oradea. Since 2001 I have been a university Instructor at the same discipline, then since 2004 Assistant Professor and since 2014 I have been Associate Professor at the Faculty of Medicine of the Faculty of Medicine and Pharmacy in Oradea.

My academic career is characterized by conscientiousness, seriousness, rigor, and diversity that derive, on the one hand, from the desire to update the knowledge that I offer to my students so that they can benefit from forensic knowledge in their future professional activity and on the other part of my desire to gather information from various medical and legal fields useful in my training as a forensic doctor.

Over the years, as an Assistant Professor and then as an Associate Professor, I have helped to improve university curricula and teaching techniques in legal medicine. I have written legal medicine courses for both medical students (Romanian and English) as well as for law students and dentists.

I have introduced an optional course of Forensic Odontostomatological Identification to fourth year students in dentistry. This course is highly appreciated by students, who are confident that the information provided during the course will be extremely important and useful to them in their future profession.

I also have a rich postgraduate teaching activity. I have supported many postgraduate courses for doctors of various specialties, including dentists, namely:

1 Six lessons taught at the symposium: "Medical malpractice: legislation, causes" - sustained at the request of Bihor College of Physicians and of Oradea University in Oradea in 4 – 9 September 2017

2 Course taught at "Vasile Voiculescu" Summer University, XI-th edition, 2-nd session at the request of "Vasile Goldiș" University of Arad, Arad and the College of Physicians in Buzau in September 2014

3 Continuous training course "Medical malpractice - legislation, goals and practical reality" - sustained at the request of the College of Mehedinti Physicians in Drobeta Turnu Severin in May 2011

4 Course taught at "Vasile Voiculescu" Summer University, VII-th edition, 2-nd session at the request of "Vasile Goldiș" University of Arad, Arad and of the College of Physicians Buzau, May 2010

5 Course "Medical-legal repercussions in medical practice" - sustained at the request of Mehedinti College of Physicians in Drobeta Turnu Severin in June 2008
6 Communication in a postgraduate course with several lecturers entitled "Current legislation on malpractice and medical malpractice with examples in the field of dental practice" - at the request of the College of Dental Practitioners in Mehedinți in May 2008

7 "Forensic and Legal Aspects in Family Practitioner Practice" course - supported at the request of Bihor Doctors College and Oradea University in Oradea in June 2008

I was a member of committees for the organization of scientific events in 2017 (the 15th National Symposium on Microscopic Morphology with International Participation) and the scientific secretary of such an event (Inter-County Legal Medicine Conference "Medical-Legal and Legal Aspects on the Identification of Victims of Collective Accidents and Disasters", 2011)


Chairman at several international and national scientific events.

I have coordinated the development of more than 8 bachelor's papers on different topics in the field of medico-legal issues in general medicine, dentistry and law.

I was a member of the competition committees for a forensic specialist at SJML Maramures (2015) and for an Assistant professor at the UMF Timișoara (2013).

Since October 2010 I have been responsible for the Legal Medicine Teaching Laboratory of the Department of Morphological Disciplines, Faculty of Medicine and Pharmacy Oradea. Direct involvement in university management activities has given me the opportunity to strengthen academic performance in the field of Health at the University of Oradea.

BIV. The evolution and development plans of the professional career

As the scientific coordinator of PhD, I will continue the studies I started in which I will promote mainly the research directions that bring "additional value" in the field, both at national and international level.

Also, in forefront it will be developing the medical field of the University of Oradea, by stimulating and strengthening a research team and by developing the necessary research facilities.

The research directions developed so far will be continued, deepened and exploited, and the new approaches will be correlated with the current ones (forensic psychiatry, tanatology, traumatology, toxicology and forensic legislation)

Thus, in the field of forensic toxicology, I will continue the research on drug use and addiction in Romania, as well as the factors influencing this consumption in order to provide concrete data for prevention and control. I will investigate the chemical and toxicological characteristics of ethnobotanic substances which are currently difficult to detect by the means of identification used. In this regard, I will take the steps to acquire at Bihor County Oradea County Medical Service, which I coordinate, an advanced gas chromatograph. This will also be useful in toxicological analyses in forensic tanatology. The results of this research will be used not only in research but also in legal practice.

On the field of toxicology, I will extend the study internationally, I will intensify cooperation with other forensic institutions, cooperation that has already begun in 2016 since I am a TIAFT member.

And in the field of tanatology and forensic traumatology I will continue and diversify the previous research. I will continue my research on tanatogenerator mechanisms in tanatological practice. In the field of traumatology, I will deepen domestic violence research to develop prediction models that could be useful for prevention and control. I intend to study the forensic and social issues related to domestic violence and trafficking in human beings through a national multi-centre research project and to expand the research team to include PhD.

In the field of organ transplantation, I will improve the transplant “lege ferenda” proposal, which I have already designed in my PhD thesis, and will continue my research on decision-making in this field, by militating for identifying individual, medical and legislative factors
which deepens the decision to donate organs from corpses. The purpose of this research is to provide data that could be useful in intervention programs to increase organ donation.

In the field of terminal states, I will continue my researches started in the doctoral period, in this field having recently also been involved in the NGO called "The Association of Patients' Colleges", which, among other activities, deals with palliative care by accumulating data and dissemination of information aimed at improving patient care at the end of his life. Within this NGO, a research project on palliative care was proposed. This project joins other projects proposed by us, among which I am the project manager: "Developing the capacity of the College of Patients' Association to get involved in formulating and promoting alternatives to public health policies initiated by the Ministry of Health and the National Health Insurance House", a project we have already started.

Forensic psychiatry remains an important future concern in my scientific research. I will continue the research on the role of decision makers in the social reintegration of physically-experienced psychiatric patients for criminal offenses.

Also, the scientific approach to quality management of educational process and health research will be part of my future concerns.

The development of the academic career for performance in the work of doctoral coordinator will also be put into practice by participating in actions in the framework of university educational projects supporting doctoral and postdoctoral research at local level as well as through national and international.

In educational and lifelong learning programs, such as the Erasmus program, I will be actively involved in bioethics.

To highlight scientific performance, all research results will be mainly published in ISI journals. In this sense, I will intensify my research by associating with research teams from other university centers; this will be another priority for future scientific research.

As a way of acting in the future will be the application of the concept of "intelligence research".

I am convinced that empowerment will contribute to achieving these goals by increasing and diversifying research collaborators and will also open new research perspectives in the future.
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121 Buhaș C., Mihalache G., Florian S. Studiul stărilor terminale; importanţa lor medicală şi medico-legală. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004


123 Buhaș C., Mihalache G. Probleme medico-lege în resuscitarea cardio-respiratorie. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004

124 Mihalache G., Camelia Buhaș, Roșu B. Experiența noastră în armonizarea relațiilor financiare cu instituțiile și persoanele beneficari. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004

125 Lucaciu C., Buhaș C., Popescu E. Moartea subită la un tânăr de 17 ani. Aspecte medico-legale și anatomo-patologice. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004

126 Florian S., Buhaș C., Siserman C. Cercetarea de laborator biochimic aplicabilă în tanatologia medico-legală. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004

127 Roșu B., Oros R., Buhaș C. Infirmarea suspiciunii de omor prin argumente de cercetare criminalistică completate cu date medico-legate. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004

128 Pusta C., Radu C., Mihalache G., Buhaș C., Lucaciu C. Șocul infecțios – nivele substanțiale. Consfătuirea Interjudeţeană de Medicină Legală, Oradea, 9 – 11 septembrie 2004


130 Buhaș C., Mihalache G. Răspunderea juridică și deontologică în practica medicală. A XV-a Conferință Națională a AMCR, Valea Drăganului, 5 – 8 August 2004

131 Buhaș C., Mihalache G. Study of several thanatogenerator syndromes by competitive factors: experimetal model. 2-nd Annual Meeting of The Balkan Academy of Forensic Sciences, june 2004, Serres, Greece


143 Buhaş C. Despre asistenţa de urgenţă şi urgenţele medico-legale. Sesiunea Anuală de Comunicări Ştiinţifice, Ediţia XII, Oradea, iunie 2002

144 Lucaciuc C., Buhaş C. Modificările morfopatologice macro- şi microscopice la nivelul pielii: element esenţial în diagnosticul spânzurării. Sesiunea Anuală de Comunicări Ştiinţifice, Ediţia XII, Oradea, iunie 2002

145 Buhaş C., Lucaciuc C., Mihalache G. Eficienţa şi limitele amprentei digitale în procesul de indentificare al cadavrului. Sesiunea anuală de comunicări ştiinţifice, Ediţia XII Medica 2002, Universitatea Oradea

146 Mihalache G., Ardelean H., Buhaş C. Despre noţiunea de „expert” cu referire la expertiza medico-legală psihiatrică. Conferinţa Naţională de Psihiatrie „Actualităţi în cercetarea psihiatrică” Timişoara 2002,

147 Buhaş C. Noţiuni de etică şi răspundere în înfăptuirea actului medical şi în redactarea actelor medicale. Consfătuirea Interjudeţeană de Medicină Legală, Reşiţa, octombrie 2000

### CIII. CURRICULUM VITAE

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<td>Universitatea din Oradea - Facultatea de Medicină și Farmacie - Departamentul Discipline Morfologice Conferențiar universitar</td>
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### Experiența profesională

#### Perioada 2017 - prezent
Medic primar medicină legală, șef Serviciul Județean de Medicină Legală Bihor – Oradea
Activități și responsabilități principale:
- Coordonarea întregii activități de medicină legală din cadrul Serviciului Județean de Medicină Legală Bihor - Oradea din punct de vedere administrativ și metodologic: examinări pe persoana în viață (expertize, constatări), expertize pe pe cadavre, analize de laborator toxicologice, histopatologice și biocriminalistice, al activității din diverse comisii (președinte al comisiei de psihiatrie medico-legală)
- Reprezentarea serviciului județean de medicină legală în relațiile cu alte instituții (poliție, parchet, judecătorii, spitale, etc) sau cu persoane fizice.
- Consultații medico-legale, expertize medico-legale, autopsii medico-legale, analize de laborator cu specific medico-legal

Numele și adresa angajatorului: Spitalul Clinic Județean de Urgență Oradea, str. Gheorghe Doja, nr. 65, loc. Oradea, jud. Bihor, tel +40 0259211345, mail: spitalul.judeţean@rds.or.ro
Tipul și sectorul de activitate: Medicină

#### Perioada 2012 – prezent
Conferențiar universitar - Disciplina Medicină Legală, Departamentul Discipline Morfologice, Facultatea de Medicină și Farmacie, Universitatea din Oradea
Activități și responsabilități principale:
- Activitate didactică în domeniul Medicină Legală: susținere de cursuri și lucrări practice cu studenții anului VI de la medicină generală, anului IV de la medicină dentară și drept; evaluarea studenților
- Coordonarea/indrumarea a peste 8 lucrări de licență/an în specialitatea Medicină Legală la specialitățile: Medicină Dentară, Medicină Generală și Medicină - Secția engleză și Drept
- Membru în două comisii de examen pentru medic specialist medicină
<table>
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<th>Teză de abilitare/Habilitation thesis</th>
<th>Assoc. Prof. Dr. Camelia Liana Buhaş</th>
</tr>
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| Perioada 2003 - prezent               | Medic primar medicină legală - Spitalul Clinic Județean de Urgență Oradea – Serviciul Judetean de Medicină Legală Bihor – Oradea |
|                                      | Activități și responsabilități principale: |
|                                      | - Activitate specifică domeniului: consultări medico-legale, expertiză medico-legale, autopsii medico-legale, analize de laborator cu specific medico-legale |
|                                      | - Membru în comisia de reatestare profesională a unui medic legist în anul 2015 (Decizia Biroului Executiv al CM Sâlaj din 16.06.2015) |
|                                      | - Activitate specifică de cercetare (participare la proiecte de cercetare) |
|                                      | - Activitate publicistică: articole publicate în extenso în reviste cotate ISI, BDI, studii publicate în volumele unor manifestări științifice internaționale/naționale |
|                                      | Organizator de cursuri postuniversitare |
|                                      | Numele și adresa angajatorului: Spitalul Clinic Județean de Urgență Oradea, str. Gheorghe Doja, nr. 65, loc. Oradea, jud. Bihor, tel +40 0259211345, mail: spitalul.judeţean@rds.or.ro |

| Perioada 2008 - 2011                  | Medic primar medicină legală, șef Laborator Clinic de Medicină Legală din cadrul Serviciului Județean de Medicină Legală Bihor – Oradea |
|                                      | Activități și responsabilități principale: |
|                                      | - Coordonarea activității de medicină legală din cadrul laboratorului clinic de medicină legală din punct de vedere al examinărilor pe persoana în viață (expertize, constatații) și al activității din diverse comisii (președinte al comisiei de amânare/interrupere a executării pedepsei privative de libertate pe motive medicale, președinte al comisiei de psihiatrie medico-legala) |
|                                      | - Consultații medico-legale, expertiză medico-legale, autopsii medico-legale, analize de laborator cu specific medico-legala |
|                                      | Numele și adresa angajatorului: Spitalul Clinic Județean de Urgență Oradea, str. Gheorghe Doja, nr. 65, loc. Oradea, jud. Bihor, tel +40 0259211345, mail: spitalul.judeţean@rds.or.ro |

| Perioada 2004 - 2012                  | Șef lucrări - Disciplina Medicină Legală, Catedra de Anatomie, Facultatea de Medicină și Farmacie, Universitatea din Oradea |
|                                      | Activități și responsabilități principale: |
|                                      | - Activitate didactică în domeniul Medicină Legală: susținere de cursuri și lucrări practice cu studenți anului VI de la medicină generală, anului IV de la medicină dentară și drept; evaluarea studenților |
|                                      | - Coordonarea/îndrumarea a peste 8 lucrări de licență/an în specialitatea Medicină Legală a specialităților: Medicină Dentară, Medicină Generală și Medicină limba engleză și Drept |
|                                      | - Elaborarea unor cărți în calitate de unic autor, de coautor și a unor capitole în cărți de specialitate și note de curs |
|                                      | - Secretar științific la Consfătuirea Interjudețeană de Medicină Legală "Aspekte medicol-legale și juridice privind identificarea victimelor din accidente colective și dezastre", 13 – 15 ianuarie 2011, Oradea |
- Activitate publicistică: articole publicate în extenso în reviste cotate ISI, BDI, studii publicate în volumele unor manifestări științifice internaționale/naționale
- Secretar științific la Consfătuirea Interjudețeană de Medicină Legală "Aspecte medico-legeale și juridice privind identificarea victimelor din accidente colective și dezastre", 13 – 15 ianuarie 2011, Oradea
- Responsabil Laborator Didactic de Medicină Legală din cadrul Departamentului de Discipline Morfologice, Facultatea de Medicină și Farmacie Oradea din anul 2010
- Tipul și sectorul de activitate: Învățământ superior medical

### Perioada 2001 - 2004

**Asistent universitar** - Disciplina Medicină Legală, Catedra de Anatomie, Facultatea de Medicină și Farmacie, Universitatea din Oradea

**Activități și responsabilități principale:**
- Activitate didactică specifică: lucrări practice cu studenții de la medicină generală, medicină dentară și drept
- Îndrumarea a 5 lucrări de licență/an în specialitatea Medicină Legală la specialitățile: Medicină Dentară, Medicină Generală
- Activitate publicistică: articole publicate în extenso în reviste cotate BDI, studii publicate în volumele unor manifestări științifice internaționale/naționale

**Tipul și sectorul de activitate:** Învățământ superior medical

### Perioada 1999 - 2003

**Medic specialist medicină legală** - Spitalul Clinic Județean de Urgență Oradea – Serviciul Județean de Medicină Legală Bihor – Oradea

**Activități și responsabilități principale:**
- Activitate specifică domeniului: consultații medico-legeale, expertize medico-legeale, autopsoii medico-legeale, analize de laborator cu specific medico-legal
- Activitate publicistică: articole publicate în extenso în reviste cotate ISI, BDI, studii publicate în volumele unor manifestări științifice internaționale/naționale

**Numele și adresa angajatorului:** Spitalul Clinic Județean de Urgență Oradea, str. Gheorghe Doja, nr. 65, I. Oradea, jud. Bihor, tel. +40 0259211345, email: spitalul.județean@rds.or.ro

**Tipul și sectorul de activitate:** Medicină

### Perioada 1997 - 2001

**Preparator universitar** - Disciplina Medicină Legală, Catedra de Anatomie, Facultatea de Medicină și Farmacie, Universitatea din Oradea

**Activități și responsabilități principale:**
- Activitate didactică specifică: lucrări practice cu studenții de la medicină generală, și medicină dentară
- Activitate publicistică: articole publicate în extenso în reviste cotate ISI, BDI, studii publicate în volumele unor manifestări științifice internaționale/naționale

**Tipul și sectorul de activitate:** Învățământ superior medical

### Perioada 1992 - 1996

**Medic de familie** - Dispensarul Medical Comunal Uileacu din Beiuș, jud. Bihor

**Activitate specifică de medicină generală**

**Tipul și sectorul de activitate:** Medicină

### Educație și formare

**Cursuri de educație și formare**

- **Perioada 22 – 24.05.2017**
  **Curs - Actualități în diagnosticul și tratamentul patologiei prostatiche**
  CM Bihor, FMF Oradea, România
  Abilități de sinteză și evaluare în activitatea expertală medico-legală interdisciplinară

- **Perioada 30.10.2015 – 1.11.2015**
  **Curs - Responsabilitatea profesională în medicina – de la etica la legislație**
  MECTS - UMF "Gr. T. Popa" Iasi
  Abilități de sinteză și evaluare în activitatea expertală

- **Perioada 1.10.2015 – 3.10.2015**
  **Curs - Îmbunătățirea serviciilor medicale pentru victimele traficului de persoane**
  Asociația Pro – Refugiul – ONG, București, România (participant ca grup țintă în Proiect de cercetare finatat prin granturile SEE 2009 - 2014)
  Abilități specializate în domeniul traficului de persoane și activitatea expertală medico-legală specifică acestui domeniu

- **Perioada 7.04.2014 – 11.04.2014**
  **Curs - Actualități tehnologice și legislative în expertizele toxicologice medico-legală**
  MECTS - UMF "îlului Hâțeganu" Cluj – Napoca
  Abilități de sinteză și evaluare în activitatea expertală de toxicologie medico-legală

- **Perioada aprilie 2012 – aprilie 2013**
  Expertiza medico-legală psihiatrică
  FSE, Programul Operețional Sectorial Dezvoltarea Resurselor Umane Standarde europene pentru programe postdoctorale competitive de formare în domeniul Nivel EQF 8
### Teză de abilitare/Habilitation thesis

**Assoc. Prof. Dr. Camelia Liana Buhaș**

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<td>Curs de Formare Mediator Consiliul de mediere - Adev. Nr 8531/2012 (curs postuniversitar), Diplomă de mediator Abilități avansate de comunicare, psihologie în scopul medierii conflictelor interumane</td>
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<td>2012</td>
<td>Curs de Serologie și genotipare AND în practica medico-legálă MECTS - UMF &quot;Iuliu Hațieganu&quot; Cluj – Napoca Abilități de sinteză și evaluare în activitatea expertală și de cercetare medico-legálă</td>
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<td>Ianuarie – iunie 2012</td>
<td>Managementul cercetării avansate Nivel EQF 8 FSE, Prog. Operațional Sectorial Dezvoltarea Resurselor Umane Standarde europene pentru programe postdoctorale competitive de formare în domeniul managementului cercetării avansate și expertizei psihiatriche medico-legale Abilități de sinteză și evaluare în cercetare</td>
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<td>Modul de psihopedagogie MECTS – Universitatea din Oradea Abilități specializate de formare profesională a elevilor și studenților</td>
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<td>Medic primar în specialitatea Medicină Legală Ministerul Sănătății din România Abilități avansate în specialitatea medicină legală</td>
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<td>Perioada 1999 - 2003</td>
<td>Medic specialist în specialitatea Medicină Legală Ministerul Sănătății din România Abilități avansate în specialitatea medicină legală</td>
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<td>Diplomă de licență – Medicină Nivel EQF 6 MECTS, Universitatea de Medicină și Farmacie &quot;Iuliu Hațieganu” Cluj-Napoca, Facultatea de Medicină Abilități avansate care denotă control și inovație, necesare pentru a rezolva probleme complexe și imprevizibile în domeniul științelor juridice</td>
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<td>Perioada 1980 - 1984</td>
<td>Diplomă de bacalaureat Liceul „Emanuil Gojdu” Oradea, profil matematică-fizică</td>
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### Aptitudini și competențe personale

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(*) Nivelul Cadrului European Comun de Referință Pentru Limbi Străine

**Competențe și abilități sociale**

- Spirit de echipă, având capacitatea de a lucra cu un colectiv pe care îl coordonez, format din medici legiști și asistenți medicali, precum și cu specialiști din alte domenii de activitate.
- Bună capacitate de comunicare: cursuri și lucrări practice cu studenții, cursuri postuniversitare cu medici, cursuri de formare profesională pentru meseria de autosipier.
- Abilități de prezentare a lucrărilor susținute în cadrul manifestărilor științifice (congrese, conferințe) internaționale și naționale și a cursurilor postuniversitare organizate pentru medici.

**Competențe și aptitudini organizatorice/manageriale**

- Spirit organizatoric având în perioada 2008 – 2011 de coordonat o parte din activitatea de medicină legală din cadrul serviciului, respectiv activitatea care se referă la persoane în viață, la care se solicită un document medico-legal, indiferent de tipul acestuia.
- Experiență în aplicarea și implementarea unor proiecte de cercetare:
  - Leadership: **Expert consultant 1** (coordonator al echipei de experti consultanți cu ocazia implementării proiectului Laborator mobil de medicină legală pentru situații de urgență în zona transfrontalieră (cod HURO/0801/153) - Lansat în 30 ianuarie 2009; finalizat în 14 ianuarie 2011; **Manager Proiect** în cadrul proiectului "Dezvoltarea capacității Asociației Colegiului Pacienților de a se implica în formularea și promovarea de alternative la politicile de sănătate publică inițiate de Ministerul Sănătății și Casa Națională de Asigurări de Sănătate", cod proiect: 110676.
  - **Expert medico-legal** în cadrul Programului internațional „Lumină pentru ceața albă” – campanie de educație antidrog, împărtășirea experienței tranfrontaliere derulat în perioada 2006 - 2007

**Competențe și aptitudini tehnice**

- Atitudini de depanare a unor aparate de birotica sau de uz casnic

**Competențe și aptitudini informatice**

- O bună stăpânire a instrumentelor Microsoft Office™ (program Word, Excel, Power Point)

**Competențe și aptitudini artistice**

- Nu prezint

**Alte competențe și aptitudini**

- Hobby: calatorii

**Permis(e) de conducere**

- Permis conducere categoria B

**Informații suplimentare**

- **Activitate de cercetare:**
  - **Manager Proiect** în cadrul proiectului "Dezvoltarea capacității Asociației Colegiului Pacienților de a se implica în formularea și promovarea de alternative la politicile de sănătate publică inițiate de Ministerul Sănătății și Casa Națională de Asigurări de Sănătate"; cod proiect: 110676. Program Operațional Capacitate Administrativa. Cod apel: POCA/111/1/1/Dezvoltarea si introducerea de sisteme si standarde comune în administraþia publica ce optimizează procesele decizionale orientate catre cetăþeni si mediul de afaceri în concordanţa cu SCAP. Componenta 1 CP2/2017 - Creşterea capacitaţii ONG-urilor şi a partenerilor sociali de a formula politici publice alternative. Axa Prioritară: Administraþia publica si sistem judiciar eficiente. Operaþiunea: Dezvoltarea si introducerea de sisteme si standarde comune în administraþia publica ce optimizează procesele decizionale orientate catre cetăþeni si mediul de afaceri în concordanţa cu SCAP. Schema de ajutor de stat.
  - **Coordonator echipa experți consultanți (expert consultant I)** în cadrul proiectului Laborator mobil de medicină legală pentru situații de urgență în zona transfrontalieră (cod HURO-0801-135) derulat în perioada 30 ianuarie 2009 – 14 ianuarie 2011
  - **Membru** în proiectul Program interdisciplinar al situaților de urgență lansat în anul 2008

Afilieri:
- Membru în Colegiul Medicilor din România
- Membru în Societatea Mediteraneană de Medicină Legală (din anul 2009)
- Membru în Societatea Balcanică de Medicină Legală (din anul 2004)
- Membru în Societatea Română de Medicină Legală (din anul 1997)
- Membru în Societatea Română de Biologie Celulară – Filiala Bihor (din anul 2015)
- Membru în Societatea Română de Morfologie (din anul 2017)

Distincții/ recunoașteri profesionale naționale/internaționale:
- Expert medico-legal gradul I (recunoaștere internațională)
- Director de Departament – Jurisdicție profesională al Colegiului Medicilor Bihor (perioada 30.03.2016 - 2020) (recunoaștere națională)
- Membru în Consiliul Județean al Colegiului Medicilor Bihor (perioada 2016 - 2020) (recunoaștere națională)
- Membru în Adunarea Generală a Reprezentanților în Colegiul Medicilor din România (perioada 2016 - 2020) (recunoaștere națională)
- Membru în Comisia de Malpraxis a DSP Bihor (din anul 2011) (recunoaștere națională)
- Membru în comisia de analiză a deceselor materne din cadrul DSP Bihor (din anul 2017) (recunoaștere națională)

Publicații:
Activitate publicistică (21):
- Prim autor/autor unic a trei cărți de specialitate, a unei cărți de specialitate în format electronic, coautor a două cărți de specialitate, colaborator la patru cărți de specialitate, autor/coautor a unsprezece capitole publicate în volum colectiv

Prezentări:
- autor/coautor la un număr total de 273 lucrări științifice de specialitate, repartizate astfel:
  - 12 articole în extenso publicate în reviste indexate ISI;
  - 32 articole publicate în extenso, în reviste indexate BDI și CNCSIS minim B;
  - 56 studii în rezumat publicate în reviste ISI/Embase sau cu ISBN/ISSN;
  - 22 studii în extenso publicate în reviste/volume cu ISBN;
  - 151 lucrări publicate în rezumat, în reviste/volumele manifestărilor științifice;

Conferințe: Participare efectivă la manifestări științifice – 85

Activități extraprofesionale:
- Consilier municipal în cadrul Consiliului Municipal al Primăriei Oradea
- Secretar al Comisiei de Sănătate din cadrul Consiliului Municipal al Primăriei Oradea

Activități profesionale complementare medico-legal:
- Reviewer manuscript number CHIABUNEG-D-17-00383.Child Abuse & Neglect Journal. F.I: 2,293, ISSN: 0145-2134, august 2017