



“LUCIAN BLAGA” UNIVERSITY OF SIBIU
“VICTOR PAPILIAN” FACULTY OF MEDICINE

**MEDICAL PRACTICE PROTOCOL IN MECHANICAL TRAUMA
THROUGH INTERPERSONAL AGGRESSION**

PhD THESIS SUMMARY

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Introduction: This research belongs to a priority area of public health, interpersonal violence, considered by the socio-human analysts a “social disease” of the contemporary century.[Durkheim cited 2] Violence often irreparably affect both the victim’s life and the aggressor’s, bringing about medical, legal, economic, social and political consequences, as well as enormous personal and social costs. Global statistics show that, for each deceased person from serious bodily injury, about 30 people are hospitalized for non-fatal injuries and 10 times more patients are treated in hospital emergency services without being admitted.[15]

Current state of knowledge: This paper deals with information pertaining to the social and medical management of the mechanically injured patient, secondary to aggression - conceptual delimitations of the “aggression” and “violence” notions and post-aggression trauma epidemiological data; specific elements of general, systemic and topographic mechanical trauma of post-aggression pathology; synthetic notions of criminal law, medical, legal, ethical and professional rules systematized and interpreted so as to become operational concepts integrated into medical practice.

Research hypotheses: Beyond its role in providing health care, trauma patient care secondary to interpersonal aggression requires the physician the responsibility to work directly or indirectly (through the medical records released) with other institutions (health, social care, police, justice) and, therefore, to contribute to the proper enforcement of justice. Meanwhile, the medical records reflect the quality and quantity of health care provided by the doctor to the patient, justifying the diagnostic and therapeutic decisions. Within the particular context due to interpersonal aggression, doctor-patient relationship can be profoundly influenced by many factors: the conflict between the interest of the patient-victim and the aggressor’s, the psychological pressure of all parties involved (victim, aggressor, health, justice system, society), as well as the dual loyalty conflict of the doctor, between his duty towards the patient and his debt to society and justice, involving medical liability issues. Although there are protocols that standardize the medical act, these protocols do not provide a complete decision support for the entire medical-social and legal context in which the trauma patient secondary to the interpersonal aggression finds himself. The central position that the physician holds in this multisectoral tripod involves new responsibilities and the need for new knowledge that would support his decisions.

The aim of the research is to develop a guide of conduct applicable at all levels of health care in order to standardize the doctor’s attitude towards the traumatic patient with the possibility to have a forensic character, to create an integrated system in approaching the patient regarding the health care system and the related fields and to exclude the negative impact of the individual factors in the trauma patient management.

Research theoretical background provides an insight into the medical-social and legal context in which the trauma patient secondary to interpersonal aggression finds himself and the central position that the physician holds in this multisectoral and interdisciplinary tripod. All along 3 chapters, there is provided information from many areas with implications in the social and health management of the trauma patient (conceptual delimitations of the “aggression” and “violence” notions, clinical and epidemiological data on the extent, consequences and costs of interpersonal aggression at global and national level, elements of general, systemic and topographical mechanical trauma, as well as elements of criminal law, medical legal, ethical and professional rules). The information is addressed synthetically, is interpreted and explained so that to become operational concepts integrated in the medical practice and to provide concrete support for the clinical judgment

The personal contribution is given by three separate studies (constituted in 3 chapters) interconnected through the causality of their conclusions.

Study I

Study objective: *Clinical and epidemiological characterization of mechanical trauma pathology secondary to heteroaggression in Sibiu County.*

Study method: descriptive (prospective and retrospective longitudinal survey with the full research of the study material). The study material is made up of the medical records of the patients with trauma pathology secondary to mechanical interpersonal aggression who sought medical attention with/without hospitalization within the County Emergency Clinical Hospital of Sibiu, as well as forensic work of the living trauma victims and the autopsy results performed within Sibiu County Forensic Service. Study period: 10 years (2003-2012).

Results and discussions: In Sibiu, interpersonal aggression share in the forensic work regarding non-fatal and fatal trauma pathology is about 70% for the study period. A quarter of the annual examinations on living persons were addressed to the victims of domestic violence. Two thirds of the mechanical postaggression trauma casuistry belongs to the age range 20-49 years old, which underlines the serious social impact of interpersonal violence at the level of the active social groups. One in ten patients was aged between 10 and 19 years old, representing an alarm signal on the early onset of the violent behaviour. Traumatic lesions were mostly located in the upper half of the body. Most non-fatal traumatic injuries were caused by blunt hitting (70%) and hitting with blunt object (38%) and hitting with a sharp cutter body (21%) for fatal traumatic injuries. About 6% of those violent deaths were homicides, in most cases, the victim’s death occurring immediately, before any live-saving manoeuvre to be possible. Head trauma was the mechanism of death in half of traumatic

deaths. More than half of fatal trauma victims had consumed alcohol before the onset of the violent conflict.

Conclusions: The magnitude of the trauma pathology secondary to interpersonal violence, communicated in the literature and confirmed at community level and by our study, leads to the overuse of the healthcare system. In this context, health system accountability is both to ensure high availability for postaggression pathology and to enforce a clear, consistent and systematic regulation for the medical practice.

Study II

Objective: *Identifying and prioritizing the main issues, difficulties and information requirements of physicians in the medical management of the mechanically trauma patient secondary to interpersonal aggression.*

Study method is the qualitative research through combined methods: 1. nominal group, considered as the most effective option for identifying and prioritizing the problems and possible solutions in health institutions, regardless of their type or level of care;[10] 2. individual focused repeated interview; 3. study case. Area of research: multicentric study, which included health facilities at all levels of health care in three counties. Group structure: 50 participants divided into 5 nominal groups. Nominal composition of the groups was performed by a two-staged bistratified sampling according to the principle of representativeness in relation to the research topic. In stage 1, selection of medical units and specialties was performed according to the method of quotas, quota criterion being the addressability level of the mechanical trauma pathology secondary to interpersonal aggression. In stage 2, the choice of subjects was performed by logic sampling, the selection criteria being the individual experience relevant to the research topic and availability for the study location. Cumulative share of the surgical specialties and Emergency Medicine counted two-thirds.

Results: The research conducted at the three sites revealed synchronous results, confirmed by the reviewed literature.[18] At family medicine level, I have identified: the need for deeper knowledge of trauma semiology, of an increased accountability regarding the identification of the violent context, to produce traumatic injuries and a clearer demarcation of powers and limits in issuing the medical certificate of cause of death. At pre-hospital emergency care level, I have noticed: the need for better assessment and coordination of situations that require mixed intervention of the medical and emergency care teams, of Police and Gendarmerie, as well as the need to create a simplified circuit in the cases of patients who died during transportation. Regarding the emergency units / departments, I have identified: problems due to insufficient recording of the original appearance of traumatic injuries requiring surgical preparation and the clinical, biological and functional

parameters describing the patient's condition on admission, lack of routine determination of alcohol in postaggression trauma patients requiring hospitalization, and the lack of rigorous practices regarding the preparation and release of medical records for patients who do not require hospitalization. At the level of clinical medicine, there can be noticed: the need for better physician's awareness of the importance of a properly prepared and complete medical documentation, both for the patient (for proper enforcement of justice) and for the doctor (for proper assessment of health care provided and in order to justify the clinical and therapeutic decisions), as well as the need to improve the information flow between clinical medicine, forensic institutions, police, prosecution, court.

Conclusions: There is a natural tendency among physicians to prioritize medical care and secondarily, to fill out the medical records. Numerous deficiencies were identified regarding how to fill out the documents and their flow, what bring about health, forensic, and legal problems. There is an expressed need of physicians at all levels to more clearly regulate how to approach the trauma patient, victim of interpersonal aggression.

Study III

is composed of 2 subsequent studies:

Study III.1

Objective: *Developing and implementing the clinical practice protocol for the traumatic mechanical pathology secondary to interpersonal aggression.*

Methods: content analysis of documents and critical analysis of data at individual and group level. The protocol was disseminated to participants in writing and there was given an implementation period of three months.

Results: Protocol structure comprises two parts. In its first part, *General recommendations* are formulated, which are applicable at all levels of care and all the clinical / laboratory medical specialties. The information is organized into seven chapters corresponding to the stages of clinical evaluation of trauma patient: *case history; physical examination; diagnosis formulation; preparation and issue of documents; recommendations and follow-up; relation with the criminal investigation and forensics institutions; medical legal liability and confidentiality of medical information.* The second part of the study includes recommendations on medical conduct at different levels of health care: *family medicine; pre-hospital emergency care; emergency unit / department; specialties with customizations according to the clinical medical specialty, surgical or laboratory.*

To improve the attractiveness and in order to ensure brevity of information, presentation of the study material was performed by graphically present the informative-educational materials.

Study III.2

Objective: *Assessing the medical practice protocol at different levels of health care.*

Methods of evaluation: 1. opinion survey having as instrument the questionnaire applied to nominal group participants; 2. Individual and group semi-structured interview. They were evaluated by the relevance scores method, performance, protocol impact, general structure of the material and mode of expression. Also, the participants were asked to make recommendations for the improvement and development of the research.

Results: The maximum score was given by 90% of respondents for the “relevance” item; by 82% of respondents to “performance”, by 78% for “impact”; by 88% of participants to the “overall structure of the material”; by 92% of the group for “clarity, brevity and precision of expression” and by 76% of the participants for the “graphical presentation” item.

Conclusion: Protocol evaluation demonstrated the ability to integrate the interdisciplinary research results and transfer them into a model of good practice with immediate enforcement.

General conclusions:

- The significant weight of postaggression traumatic pathology in medical activities, insufficient regulation of approaching the mechanically trauma patient secondary to interpersonal aggression, physician’s responsibility for becoming forensic, generated a series of problems, difficulties and information needs of physicians at different levels of health care.
- Qualitative research of the physicians’ difficulties towards the trauma patient revealed both the need for better physician’s awareness of the responsibilities and limits in health care provided to the trauma patient, and the need to operationalize the legal concepts in medical practice and to develop a set of recommendations for all levels of care.
- The applicability of the developed protocol was demonstrated by testing it on different levels of health care. The proposed material was assessed both in terms of relevance, performance, impact and general structure, mode of expressing the information and graphical representation.
- Applicability of the protocol is immediate, the protocol is built in the context of health and social legislation in force, of the current framework for the organization of the health system in Romania and the rules of medical practice covered by medical protocol.

- Protocol beneficiaries are multiple: the patient - as the beneficiary of both the health services and those of justice; physician - as a provider of health services, but also as an important factor in the enforcement of justice; justice – through the fairness of justice based on the medical and forensic documents issued by the doctor; decision-makers - the protocol being a model of good practice that can be disseminated nationally, evaluated and developed by the contribution of health professionals across the country.
- The research is an argument to encourage applicable interdisciplinary research leading to new tools and new solutions to meet the needs of professionals in the fields concerned and to the higher demands in the health care of the individual and community.

Keywords: *mechanical trauma, traumatic injuries, interpersonal aggression, medical protocols, health care, medical records, costs*

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