PRACTICAL ADVICES FOR PHYSICIANS

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Medico-legal expertise of pain in dental trauma

Veštačenje bola u traumatologiji zuba

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Introduction

Dental practice has been facing highly challenging medico-legal environment and problems related to legal expertise in everyday practice. Selaković et al. [1] have pointed out numerous issues arising in this field and offered potential strategies for overcoming such problems. The legitimacy in dental practice, responsibility and importance of relevant documents are topics addressed by numerous authors [2–5]. The best response to this problem is the appropriate education of dental practitioners in this field. The literature currently available to our dental practitioners encompasses mainly the field of forensic medicine [6, 7]. Forensic dentistry as a separate field of forensic medicine has not been paid adequate attention. Basic knowledge in forensic dentistry is accessible from rather sparse textbooks available in our country [8–11], whereas subspecialization reference books [12], [13] focused on specific topics of forensic dentistry are rare even at the global level. "Forensic dentistry, legal and medical aspects" is the only textbook [14] currently available in our country that comprehensively addresses the problems in this field. For understanding key issues of legal medicine, the book „Medico-legal expertise of non-material damage" is of great importance [15], and it is the recommended and mandatory reading for each medical and dental practitioner. The lack of up-to-date knowledge in the field of forensic medicine and dentistry is clearly reflected in the fact that only few articles addressing this topic have been published recently [16–19].

This article is an attempt to illustrate an original methodological approach to medico-legal expertise of total pain experienced after trauma of multiple teeth and surrounding tissues. The basic methodology was developed in the 90's of the last century [20, 21]. Identification and correction of certain shortcomings resulted in the first revision and modification of the original methodology some 8 years ago [15], and the second revision was performed three years ago [14].

The majority of dentists are not familiar with expert evaluation of non-material damage (civil liability) including reduction of life activities, total suffered pain, mental suffering for facial disfigurement, and these terms are mostly considered abstract classifications. It is mainly due to the fact that this segment of education is not properly addressed throughout the study curriculum, neither undergraduate nor postgraduate (specialization). Expert evaluation of the severity of injury (criminal liability) is also quite unknown to dentists. Medico-legal expertise of disability (invalidity), i.e. working inability involves salary loss and is considered material damage. In the majority of cases, disability is associated with the reduction of life activities; however, the reduction of life activity does not necessarily implicate disability. The rate (severity) of injury does not correspond with the rate of reduction of life activities.

Such an environment characterized by the lack of basic knowledge is not supportive for novel scientific and methodological approaches. The greatest support to this field came from the university teaching staff in the field of law and lawyers. This methodology does not offer the estimation of total experienced pain (subjective attitude), but its evaluation (objective attitude). The main objection of medical profession to this methodology is shifting of philosophical concept of pain into the field of mathematics. However, legal profession emphasizes this shift as the best improvement of the methodology. Nevertheless, application of this methodology enables reaching of identical conclusions irrespective of the person performing the expertise. It offers better quality

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of legal expertise in dental medicine, as well as improved competence and reputation of dentists involved in medico-legal expertise. Application of this methodology will exclude the necessity of additional "super-expertise" or unnecessary confrontation of experts in the future.

Medico-legal importance of pain

Ilić et al. [18] made a review of the book "*Libellus de dentibus*" ("Book on Teeth") by Bartolomeus Eustachio, the first book dedicated to dental medicine and teeth. In the first chapter, Eustachio attempted to elucidate the sensitivity of hard dental tissue, whereas in the fourth chapter he comprehensively addressed the innervation and vascularisation of the upper and lower jaws. This is the first step in emphasizing the relation between teeth and dental pain.

The assessment of the total physical pain experienced is one of the basic requests for medico-legal expertise in a civil litigation. The central issue of the civil procedure is the complainant, who is expected to be adequately compensated for suffered material and non-material damage.

The assessment of the total physical pain experienced is one of the basic requests for medico-legal expertise in a civil litigation. Objectification of pain intensity is considered major medical problem in dentistry practice. Pain intensity scale guides may partly simplify this task. The main problem occurs on medico-legal expertise of total pain experienced from the moment of injury until complete recovery. Dental polytrauma (several teeth injury) is the secondary problem that may include a variety of injuries and the health status of teeth at the moment of injury. Such situations assign to the expert witness a role of an "estimator" of the total pain that the patient has experienced, emphasizing the subjective factor.

The aim of this paper was to introduce a uniform procedure that simplifies medical expertise of pain, and results in the identical conclusions irrespective of the person performing the expertise. The ultimate goal is to design the methodology applicable for assessing the total pain in dental trauma, featuring the objective factor.

Methodology for assessing the total pain in dental trauma

The methodology for assessing total pain after tooth and jaw trauma was developed in the mid-90s of the XX century by Selaković [20, 21], while certain modifications were introduced during past several years [14, 15]. This methodological approach accentuates all relevant factors with high level of objectivity, and with maximum avoidance of subjective attitude towards the problem. This methodology enables reviewing and verification of each medico-legal expertise. The ultimate goal of this attempt is to develop a uniform procedure that simplifies the procedure and results in the identical conclusions irrespective of the person performing the expertise.

Physical pain as the consequence of the afflicted injury, and establishing criteria for compensation for non-material damage is a very complex problem. Diversity of organs and tissues, age and health status of a patient are only some of the factors indicating the difficulties in determining common criteria related to pain assessment. On the other hand, the medico-legal expertise of polytrauma and pain located at several sites and of different intensity is particularly intricate. Such cases mostly implicate the dominant highest-intensity pain, whereas other parameters are of somewhat less importance. Nevertheless, each individual pain can neither be ignored nor regarded as an isolated injury. Our opinion is that in case of dental polytrauma the injury and highest-intensity pain are to be considered important factors, whereas other parameters should be taken into consideration with some reservations.

Systematization of all common criteria and factors relevant to pain is an essential issue, disregarding its localization in the body. Each branch of medicine implicates particular injury categorization systems based on different criteria. Medico-legal expertise of physical pain as a form of non-material damage requires an accurate injury categorization in view of experienced physical pain and applied medical treatment. Thereby, the "International statistical classification of diseases and related health problems" [22] should be taken as the "outset" document.

Expertise of physical pain in dental trauma – starting points for pain classification

The first instance in the process of medico-legal expertise of physical pain in dental trauma is defining and predicting the preliminary medical factors. Taking these factors into consideration is the standpoint for designing the intensity scale of experienced and anticipated pain.

Physical pain is subjective sensation resulting from a somatic injury and disturbance of body integrity due to physical injury or disease.

Pain intensity evaluation and its objectivization are accomplished using the variety of scales. The most widely used is a 10-point scale, whereas 5-, 4- and 3-point scales are less common. To the purpose of medico-legal expertise a 5-point scale is the most appropriate, which impeccably reflects pain intensity in the pulp, periodontium, in the bone and soft tissues. It enables an accurate pain classification, without redundant details. The scale is as follows:

Intensity grade 1 – low-intensity pain lasting as long as the stimulation itself;

Intensity grade 2 – higher-intensity pain lasting longer then the stimulation itself;

Intensity grade 3 – high-intensity; pain responsive to analgesics, immobilization and resting and provoked by moving, speaking, eating;

Intensity grade 4 – particularly severe and enduring pain, irresponsive to analgesics;

Intensity grade 5 – the worst possible pain, long-lasting pain resulting in the state of shock.

Duration of pain is an inevitable factor, since pain can occur as instant and transient or can persist until complete recovery of the patient. Four different points in time are defined pertaining to the occurrence and persistence of pain, i.e. pain at the moment of injury, pain persistent until cure, pain in the course of medical procedure, pain during healing

and recovery period. At each of these points in time, pain can be rated according to 1–5 points at the pain scale.

Surgical classification of injuries and therapy procedures

A range of classification models for categorization of tooth injuries proved inconsistent, limited or overextensive and too complex, hence inadequate for physical pain assessment. Categorization of tooth injuries that encompasses pain intensity at the moment of injury and in the course of appropriate therapy procedure enables an objective assessment of pain. Such a categorization, relying on the "International statistical classification of diseases and related health problems" [22] are displayed in Tables 1 and 2. These categorization models considerably simplify the expertise, enabling reproducibility of the procedure using the same methodology approach in the control or super expertise. This method is enough feasible and comfortable for the expert, and yet enhances credibility of dentistry and dentists among the clients, i.e. legal entities.

Auxiliary factors

Auxiliary factors deserve particular consideration as an inevitable part of this methodology, thus their precise identification and classification is of particular importance.

Health status of teeth (organs) before injury

Assessment of pain intensity is to the great extent determined by the tooth condition (status), i.e. healthy, defective or healed tooth, sprouting tooth or parodontopathic tooth. Within the scope of tooth trauma, a parodontopathic tooth is defined as "tooth in which the height of the crown and uncovered root portion is greater than the root portion in the jawbone, irrespective of tooth-mobility". This element is important in view of lever-principle, lever arm and fulcrum. Namely, such tooth is more easily luxated or broken than the healthy one. In that respect, expertise of injury involving tooth crown breakage associated with an uncovered pulp chamber requires additional differential diagnosis confirming whether the tooth was previously healthy (vital), devitalized (endodontically-cured or diseased), parodontopathic, with a certain degree of mobility. All this necessarily suggests that the identical injury does not produce pain of the same intensity.

Multiple tooth injuries – dental polytrauma

In multiple injuries the pain of highest intensity at the moment of injury, until dental surgery procedure, in the course of procedure and recovery (healing) is considered dominant. The intensity of pain at each stage is rated [1–5]. Lower-intensity pain in other teeth is of secondary importance; however, it cannot be completely ignored. Following the rating of all individual injuries, the highest pain intensity is considered dominant, whereas other pains are graded with rate 1. Pain cannot be regarded as simple mathematical calculation. Pain of highest intensity is always dominant and most distressing for a patient. Localization of different types of pain in dental polytrauma is, however, far too limited area to enable assessment of all pain types in the same manner.

Secondary procedures

In most cases a patient completely recovers after treatment and healing, and continues with daily and professional activities. However, additional dental and medical procedures are necessary, which mostly causes pain. Such procedures include fixed prosthetics (crown grinding), apictomy, removal of ligature wires, miniplates or scars correction. This methodology implicates evaluation of such pain category with grade 1, irrespective of the number of subsequent procedures, because they are considered logical finishing point of the therapy.

Classification and assessment of pain intensity

A variety of approaches in this field results from the complex pathology and fairly large number of different injuries occurring in this region. Each classification reflects a particular aspect or aspects of this problem. The abundant literature offers comprehensive classifications of injuries of teeth, alveolar crest and surrounding soft tissues. It is of particular importance in assessing pain intensity that is determinative factor in appraising the pecuniary compensation (nonmaterial damage). The entire procedure involves two classification instances: classification of tooth and surrounding tissue injuries with a rating scale for individual pain intensity at the moment of injury until dental surgery procedure (Table 1); classification of therapy procedure – pain in the course of dental procedure and wound healing (Table 2).

These two classifications depict the injury in the course of time. The procedure differentiates the actual experienced pain and previous health status of the tooth. Namely, pain intensity and corresponding therapy procedure are not necessarily identical, even in case of the same type of injury. Injury classification itself encompasses 13 different situations, distributed into 3 sub-groups: isolated tooth injuries, combined tooth injuries and injuries of surrounding soft tissues.

Table 1 shows pain intensity at the moment of injury and until dental surgery procedure. The first column contains the injury code. The first digit is 1 (one) that represents pain mark at the moment of injury until medical processing. The second digit is the code for particular injury – the classification differs between 13 distinct injuries. The second column contains injury classification and diagnose in Latin. The third column is divided into four sub-columns for the first 10 injuries, each one for a specific health status of the tooth immediately before the injury. Under the Table is given an explanation on initial codes for each sub-column. Injuries designated with 11–13 refer to injuries of surrounding tissues. Numerical marks within these columns describe pain intensity of the injury itself. The first digit indicates pain intensity at the moment of injury, the second one the pain intensity until medical processing, whereas the third one represents the

Table 1

Classification of tooth and surrounding tissue injuries with the scale of individual pain intensities at the moment of injury until dental surgery

Code	Type of injury classification Injury-shaded fields	Pain intensity Tooth diseases and conditions H	P	DH	DI
	Isolated tooth injuries				
1.1.	*Fractura enameli et dentini coronae dentis traumatica*	1 + 0 = 1	1 + 0 = 1	0 + 0 = 0	0 + 0 = 0
1.2.	*Fractura coronae dentis completa traumatica*	2 + 1 = 3	2 + 1 = 3	1 + 0 = 1	1 + 0 = 1
1.3.	*Fractura radicis dentis traumatica*	2 + 1 = 3	1 + 1 = 2	1 + 1 = 2	1 + 1 = 2
1.4.	*Luxatio dentis traumatica*	2 + 1 = 3	1 + 1 = 2	2 + 1 = 3	2 + 1 = 3
1.5.	*Intrusio dentis traumatica*	3 + 1 = 4	3 + 1 = 4	3 + 1 = 4	3 + 1 = 4
1.6.	*Extractio dentis traumatica*	2 + 1 = 3	1 + 0 = 1	2 + 1 = 3	2 + 1 = 3
	Combined tooth injuries				
1.7.	*Luxatio dentis traumatica cum fractura enameli et dentini coronae dentis*	2 + 1 = 3	1 + 1 = 2	2 + 1 = 3	1 + 1 = 2
1.8.	*Luxatio dentis traumatica cum fractura coronae dentis completa*	3 + 2 = 5	2 + 2 = 4	2 + 1 = 3	1 + 1 = 2
1.9.	*Luxatio dentis traumatica cum fractura radicis*	3 + 2 = 5	2 + 2 = 4	2 + 1 = 3	1 + 1 = 2
1.10.	*Fractura dentis comminutiva*	4 + 3 = 7	3 + 3 = 6	4 + 3 = 7	3 + 3 = 6
	Injuries of surrounding tissues				
1.11.	*Fractura processus alveolaris*				3 + 2 = 5
1.12.	*Fractura mandibulae (maxillae)*				4 + 3 = 7
1.13.	*Vulnus lacerocontusum* (*cutis, labii oris, gingivae, linguae*)				2 + 1= 3

H – healthy, P – parodontopathic, DH – devitalized healthy, DI – devitalized infected.

Table 2

Classification of therapy procedures and table of individual pain intensity (5-point scale)

Code	Procedure – description of healing stage	PIP	PIH	TIP
2.1.	Direct pulp-capping – No pain during healing stage, secondary procedure involve dental filling	1	0	1
2.2.	*Exstirpatio pulpae vitalis* – No pain during healing stage, secondary procedure involve dental filling or crown onlay/inlay	1	0	1
2.3.	*Exstirpatio pulpae vitalis* – Ortodontic root extraction and crown onlay/inlay	1	1	2
2.4.	Apicotomia – Sutures present during healing stage, secondary procedure involve dental filling or crown onlay/inlay	1	1	2
2.5.	*Exstractio dentis* – No pain during healing stage, secondary procedure involve prosthetic denture	1	0	1
2.6.	*Exstractio chirurgica* – Sutures present during healing stage, secondary procedure involve prosthetic denture	1	1	2
2.7.	*Reinplantatio dentis* – splint at later phase	1	1	2
2.8.	*Repositio cum fixatio dentis* – splint at later phase	1	1	2
2.9.	*Repositio cum fixatio peocessus alveolaris* – splint at later phase	1	2	3
2.10.	*Repsitio cum immobilisatio bimaxillaris* – Inability of mouth opening, problems at eating	2	2	4
2.11.	Wound treatment – Sutures present during healing stage, secondary procedure may include scar correction	1	1	2
2.12	*Exstractio chirurgica sequestri* (corpori alieni) – Sutures or iodine gauze present during healing stage	2	1	3

PIP –Pain intensity during procedure; PIH – Pain intensity during healing; TIP –Total intensity of experienced pains.

sum thereof. Hence, the code 1.3.1 in a report refers to the breakage of healthy tooth root, and the intensity of experienced pain is rated 3.

Table 2 contains the classification of therapy procedures associated with pain intensity scale. Selection of therapy procedure is determined by the character of injury, period elapsed from the moment of injury, skills of a dentist and staff, available equipment and facilities, age of the patient, level of oral hygiene, cooperativeness of the patient during therapy and the patients' needs with respect to particular oral health standard. Some procedures are repeated from practical reasons, with the aim to determine the continuity of pain intensity in the course of healing, as well as differences resulting from the need for secondary procedures. The assessment of pain intensity during the procedure is always associated with administration of local anesthetics, which are (by ethical reasons) indispensable under such circumstances.

Based on the obtained overall assessment of all experienced pains, the following pain scale can be designed, encompassing the 5 basic pain categories with the range 1–25: Category I – Mild pain – intensity rate 1–5; Category II –

Substantial pain – intensity rate 6–10; Category III – Severe pain – intensity rate – 11–15; Category IV – Extremely severe pain – intensity rate 16–20; Category V – Excruciating pain – intensity rate 21–25.

In the context of general medical traumatology, tooth injuries cannot reach the rate beyond 15, i.e. could be classified into categories I to III. Only associated with the jaw fracture they could be assigned to category IV.

Note: This methodology is currently applied only in dentistry, yet the possibility of its wider application is evident. In that respect, the category V is introduced for evaluation of overall pain experienced by general polytrauma of the body.

The procedure encompasses several stages: identifying the number of injured teeth; diagnosing the health status of the tooth at the moment of injury; selecting therapy procedures for each particular tooth; identifying prospective secondary procedures; entering codes into the "Record Sheet", as well as all numerical indicators; assessment and categorization of all experienced pain.

On the basis of specialist reports, record protocols and sheets, injury-record sheets, radiographs and diagnostic procedures, actual status is determined. All the parameters are entered into the "Record Sheet on Intensity of Overall Pain Experienced at the Trauma of Teeth and Surrounding Tissue". It is essential to rank all individual injuries according to the intensity of overall experienced pain. The injury with highest overall intensity is dominant, i.e. it is accepted as a whole. Other individual injuries are presented through their total intensity in the next to the last column of the Record Sheet. This methodology regards all other pains as minimal, thus their rating at the pain scale is 1. The final overall rating of the total experienced pain is calculated by summarizing pain intensity rates for all individual injuries ranked and assessed using the aforementioned pattern.

Some examples from everyday practice

Example 1 (Table 3)

The medico-legal expertise of total pain experienced in tooth trauma can be established based on comprehensive medical records. The relevant medical records and documentation [19] give a detailed overview of maxillary tuberosity fracture arising as a complication of tooth extraction. Medical error and medical malpractice lawsuit is determined, which is considered criminal liability. In a consequent civil procedure, compensation for non-material damage, i.e. total pain suffering damage is requested. Medical factors considered in the evaluation of total pain suffered revealed the following: The patient referred to the dentist with pain in tooth 17 that was infected and indicated for extraction. During procedure performed in local anesthesia, tuberosity fracture occurred (1.11.), along with traumatic luxation of two teeth (1.4.4. and 1.4.1.), laceration and contusion of gingiva (1.13.). The injury was not recovered after 2 days. Under local anesthesia, the tuberosity was removed (2.12.), both teeth extracted (2.6.) along with the management of oroantral communication (2.11.). The procedure was well documented, containing all medical elements for further expertise. The dentist is not responsible for pain preceding patient's first visit. At the moment of injury, pain was not of maximum intensity because of local anesthesia. Augmentation or pterygoid implant is a possible solution.

According to the intensity of pain, the most intense pain is associated with tuberosity fracture. The overall pain suffered is rated 12, which is assigned into pain category III.

Example 2 (Table 4)

A 46-year-old woman fell down by an abrupt braking of a bus and suffered fracture of a lower jaw body as well as the bite wound in the lower lip, extrusion of two parodontopathic and one healthy tooth, and tearing of the surrounding gingiva (a total of 6 individual injuries). The wounds in the mouth and skin were sutured, and lower jaw immobilized. Secondary intervention included bridge mounting. Table 4 shows that this patient experienced category IV pain – extremely severe pain, rated 17 at the intensity rate scale. Without jaw fracture, the total intensity of pain cannot exceed rate 15 of the pain scale.

Example 3 (Table 5)

Multiple injuries in the head and chest are made by two close-range gunshots. The victim falls to her knees because of the hit in the head with the gun's stock (downward force).

Table 3

Example 1 – Filled-out Record Sheet total intensity of experienced pain

Name of the patient	
Address	
Identification number	
Date	

No	Injury localization	Injury code (total intensity)	Therapy code (total intensity)	Total pain intensity	Rate
1.	Maxillary tuberosity	1.11. (5)	2.12. (3)	8	8
2.	Tooth 17	1.4.4. (4)	2.6. (2)	6	1
3.	Tooth 18	1.4.1. (4)	2.6. (2)	6	1
4.	Gingiva	1.13. (3)	2.11. (2)	5	1
Secondary procedure - description:		Augmentatio, inplantatio			1
Overall rate of experienced pain					12

Table 4

Example 2 – Filled-out Record Sheet total intensity of experienced pain

Name of the patient _____
Address _____
Identification number _____
Date

No	Injury localization	Injury code (total intensity)	Therapy code (total intensity)	Total pain intensity	Rate
1.	Jaw fracture	1.12. (7)	2.10. (4)	11	11
2.	Lower lip	1.13. (3)	2.11. (2)	5	1
3.	Gingiva	1.13. (3)	2.11. (2)	5	1
4.	Tooth 33	1.6.1. (3)	/	3	1
5.	Tooth 32	1.6.2. (1)	/	1	1
6.	Tooth 31	1.6.2. (1)	/	1	1
Secondary procedure - description:		Dental bridge			1
Overall rate of experienced pain					17

Table 5

Example 3 – Filled-out Record Sheet total intensity of experienced pain

Name of the patient _____
Address _____
Identification number _____
Date

No	Injury localization	Injury code (total intensity)	Therapy code (total intensity)	Total pain intensity	Rate
1.	Chest	5 + 4 = 9	2 + 3 = 5	14	14
2.	Pneumothorax	4 + 3 = 7	2 + 2 = 4	11	1
3.	Jaw fracture	1.12. 7	2.10. 4	11	1
4.	Tooth 14	1.10. 7	2.12. 3	10	1
5.	Tooth 13	1.10. 7	2.12. 3	10	1
6.	Tooth 12	1.10. 7	2.12. 3	10	1
7.	Fractura proc. alveolaris	1.11. 5	2.12. 3	8	1
8.	VLC linguae	1.13. 3	2.11. 2	5	1
9.	Scalp	1.13. 3	2.11. 2	5	1
Secondary procedure - description:		Dental bridge			1
Overall rate of experienced pain					23

VLC – *Vulnus lacerocontusum.*

At this position of the victim, the defendant was on her right side and shot the first bullet from the distance of 50 cm, which caused entry wound in the right nasolabial sulcus. Along the bullet pathway, destruction of the alveolar ridge (1.11.) and 3 teeth 14, 13 and 12 (1.10.1.) was apparent. The penetrating missile hit the lower jaw on the lingual side. The bullet retarded by striking the juncture between the alveolar crest base and the body of the lower jaw in the region 34–36, causing fracture of the lower jaw (1.12.). After recoiling, the bullet and its fragments remained in the left sublingual space causing laceration and contusion of the tongue and mucosa of the floor of oral cavity (1.13.). The victim fell facedown and the defendant fired the second shot causing entry wound in the region of the scapula. Along its track, the bullet penetrated the upper part of the right lung causing pneumothorax. The clavicle region is the exit site of the bullet. The injuries apparent in the maxillofacial region and associated suffered pain are classified into Category IV. Maxillofacial pain even exceeding grade [21] without chest injury would not be accepted. Potential secondary procedures associated with pain include augmentation of upper jaw ridge and placement of three implants. In this case, the pain can be assigned to the Category V, i.e. excruciating pain.

If there had not been any chest injuries, the most intense and durable pain would have been the lower jaw injury (grade 11) with total suffered pain being grade 18. Thus, the head injury would be classified as total pain of the Category IV.

Because of gunshot wound in the chest, the most intensive pain was reported in this region. The victim experienced pain of highest intensity (grade 5 pain resulting in the state of shock and consciousness lost) at the moment of bullet passing through her chest. Until medical treatment, she experienced pain graded 4 (enduring pain irresponsive to analgesics or immobilization). During medical treatment (before, during and after general anesthesia) she suffered pain graded 2. Throughout the postoperative recovery stage, she reported grade 3 pain. All this resulted in assessment of the intensity of total suffered pain to be 14. The total pain suffered is graded 23, classif it to Category V (excruciating pain).

In this case, 20 years after developing this methodology and on the basis of a 30-year-long experience in oral surgery,

the author allowed himself to perform medico-legal evaluation of pain that is not the subject of his medico-legal license.

Conclusion

The described methodology enables the uniform approach in pain assessment. Methodologies applied so far encompassed more subjective approach. In repeated expertise, discrepancies were frequent and anticipated due to an inconsistent procedure protocol. The described approach provides an appropriate protocol for obtaining identical results in repeated expertise. This approach is somewhat arguable from the point of view of medicine and dentistry, yet it is highly feasible in legal practice. It provides clear legal qualification excluding any doubts with respect to the competence of medico-legal expertise.

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