Assessment of dentistry sequelae in civil expertise

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Publicado por: Imprensa da Universidade de Coimbra

URL persistente: URI:<http://hdl.handle.net/10316.2/33227>

DOI: DOI:http://dx.doi.org/10.14195/1647-8630_24_7

Accessed : 26-Apr-2023 08:41:16

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DEZ. 2013 • ANO XXII • N.º 24

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Assessment of dentistry sequelae in civil expertise

Verçosa CB¹, Corte-Real AT², Vieira DN^{3,4}, Melani RFH¹

Introduction

The evaluation of the body injuries, in civil law, is a field of medical expertise that has been gaining relevance in forensic practice. It is performed to learn about the consequences that a trauma, usually accidental, has in the psico-physical integrity and on the health of an individual(1-3).

Oro-facial traumatic injuries are a common problem and several studies report an increase of the incidence of these lesions in the past decades (4-7). Different situations may be appointed as cause, but traffic accidents are the most frequent of them (8). Dental damage is often considered less important in the context of life threatening, sensitive or motion limitation injuries, found in severe accidents, but its valorization should not be neglected(9). Dental injuries can lead to severe complications with limitation to some orofacial functions, impairment of social life or even of the professional career of the victim(10).

The combination between the reduction of the prevalence dental cavities with the impact of violence, traffic accidents and sports activities has contributed to the establishment of dental injuries and orofacial trauma as problem related to public health with significant economic consequences (11).

In Portugal, accident victims who have not entered into an agreement with insurers (3%) are evaluated in the National Institute of

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Legal Medicine and Forensic Sciences. Victims go through a careful forensic evaluation and a report is made after the cure or stabilization of the injuries.

The objective of this research is to analyze the epidemiologic characteristics of the orofacial trauma Civil evaluation in the different branches of the National Institute of Legal Medicine and Forensic Sciences. In parallel, we also verified the parameters of these evaluations for body trauma and the Portuguese method and how it is applied to dental trauma.

Materials and methods

The sample is a collection of 64 reports recovered from the Center (Coimbra), North (Porto) and South (Lisbon) branches of the Portugal's National Institute of Legal Medicine and Forensic Sciences between the years 2002 and 2011, where exclusively dental trauma was observed in the course of the medical evaluation.

The study is a retrospective analysis of those reports, and a data collection chart was used to extract the information to characterize the victims, the nature of the event, the dental trauma that occurred and the parameters of damages that were evaluated.

The collected data was organized in tables, graphics and through adequate statistical analysis. To verify the significance of the association between the variables the chi-squared and Fisher exact tests were applied. For the comparison of the values of the variables APIPP between genders, non-parametric tests of Mann-Whitney and between age ranges the non-parametric Kruskal-wallis test. For all cited tests the maximum achievable statistic significance level was of 5% ($p \leq 0.05$) and the software used was the SPSS version 13.0.

All permissions were granted by the research ethics committee of the University of São Paulo Dental School under protocol n° 71/11, C.A.A.E. 0080.0.017.000-11.

Results

During the 10 years interval there were 11517 forensic reports related to medical evaluation of bodily damages in Civil law. Dental trauma was present in 180 of them (1.56%). Among those, 64 involved exclusively dental injuries and sequelae.

Age, gender and road accident type

The majority of the victims were women (60.9%) and their age ranged from 5 to 75 years old, with an average of 32.83 years (SD 16.82). Traffic accidents were the primary cause of injuries (54.7%), followed by pedestrian run over (18.8%), violent assaults (12.5%), professional responsibility (9.4%) and other causes (4.7%) (Fig. 1). Through chi-squared and the Fisher exact it was possible to verify that the cause of the injuries was associated with gender. Violence, among others, were significantly associated with male victims ($p=0.003$) but no variable was associated with the age intervals.

Healing or consolidation time

The healing time was over 180 days in 43.8% of the cases, between 30 and 180 days in a percentage of 29.7%, and 26.6% consolidated in less than 30 days (Fig. 1).

Fig. 1 - Healing time and cause of the injuries

Injuries

In the collected reports, previous dental state of preservation was described in 6.3% of the cases. Only directly related to dentistry was considered situations.

As the same person can present multiple injuries, an increase number of traumas (n=96) was observed compared to the number of injured individuals (n=64).

Among the reported oral-facial injuries (Fig. 2), the dental loss was present in 56.3% of the sample, as well as post-traumatic occlusal interferences or disorders of temporal-mandibular joint, in 34.4%, scars in 29.7%, crown fractures in 21.9% and mouth opening range reduction in 7.8%. At the forensic examination, some victims had already gone through restorative treatment (n=25) (Fig. 2), with the restorative fixed prosthesis in 15.6%, the presence of dental implants in 12.5%, and partial removable prosthesis in 10.9%.

Fig. 2 - Orofacial injuries type and rehabilitation

Corporal damage parameters

Damages parameters assessed in the forensic reports in civil law forensic reports in Portugal are: functional deficit (temporary and permanent), total and partial; *quantum doloris*; esthetical damage; professional activity impact (temporary and permanent), total or partial; sexual activity impact; sports and leisure activities impact; permanent functional deficit (Table 1); dependencies and future damages. Forensic reports referring to orofacial damage alone represent 36% of the total number of cases studied (n = 64), and are described in Table 2.

Table 1- Corporal damage items assessment (n = 116)

	Temporary Damage					Permanent Damage			
	TTFD ¹	TPFD ²	TTIPA ³	TPIPA ⁴	QD ⁵	ED ⁶	SAI ⁷	SLAI ⁸	PFD ⁹
Maximum	1101	1419	1327	1954	6	7	7	7	97
Minimal	0	0	0	0	0	0	0	0	0
Average	104.34	392.47	300.44	153.6	4.34	2.78	0.31	0.73	21.79
Standard deviation	180.96	334.91	312.68	310.3	1.26	1.67	1.12	1.42	22.44

¹TTFD – temporary total functional deficit period refers to the time in which the victim was totally unable to perform activities of daily living.

²TPFD – temporary partial functional deficit period refers to the time in which the victim could, with some autonomy, do the activities of daily living.

³TTIPA – temporary total impact on the professional activities period refers to the time in which the victim was totally unable to engage in professional activities.

⁴TPIPA – temporary partial impact on the professional activities period refers to the time in which the victim could, with limitations, do the activities of professional life.

⁵QD – *quantum doloris* corresponds to the valuation of the physical and mental suffering experienced by the victim between the event date and the date of healing / consolidation of injuries.

⁶ED – esthetical damage corresponde corresponds to the impact of sequelae, in a static and dynamic perspective, involving a personalized assessment of victim's image affectation.

⁷SAI – sexual activity impact corresponds to the total or partial limitation on the level of performance / sexual gratification, resulting from physical and/or psychic sequelae.

⁸SLAI – sports and leisure activities impact corresponds to the specific impossibility to the victim to engage in certain leisure activities who exercised regularly and that accounted for her personal gratification.

⁹PFD – permanent functional deficit corresponds to the permanent affectation of person's physical and/or psychic integrity.

Table 2 - Corporal damage items assessment in orofacial damage alone cases (n = 64)

	Temporary Damage					Permanent Damage			
	TTFD ¹	TPFD ²	TTIPA ³	TPIPA ⁴	QD ⁵	ED ⁶	SAI ⁷	SLAI ⁸	PFD ⁹
Maximum	180	3527	1018	2299	5	5	3	7	30
Minimal	0	0	0	0	1	0	0	0	0
Average	25.23	330.88	110.36	172.6	3.27	1.69	0.09	0.61	6.6
Standard deviation	34.11	562.69	212.97	447.4	1.1	1.37	0.53	1.23	8.03

Temporary corporal damage items

Table 3 – Description of the parameters related with temporary damages

Temporary damage	Category	Cases	%
TTFD	30 days or less	51	79.7
	31 to 180 days	13	20.3
TPFD	30 days or less	17	26.6
	31 to 180 days	21	32.8
	Over 180 days	26	40.6
TTIPA	30 days or less	37	57.8
	31 to 180 days	14	21.9
	Over 180 days	13	20.3
TPIPA	30 days or less	45	70.3
	31 to 180 days	7	10.9
	Over 180 days	12	18.8
QD	Very Quick	5	7.8
	Quick	9	14.1
	Moderate	22	34.4
	Medium	20	31.3
	Considerable	8	12.5

Table 4 – Comparison of parameters for assessing temporary damages between genders

Temporary damage		Gender				p
		Female		Male		
		n	%	n	%	
TPIPA	30 days or less	30	76.9	15	60.0	0.030*
	31to 180 days	1	2.6	6	24.0	
	Over 180 days	8	20.5	4	16.0	
	Considerable	5	12.8	3	12.0	

* significant $p \leq 0.05$

Through the results of the Qui-square and the Fisher exact test it was verified that the only variable significantly associated to gender was the TPIPA. For this injure, it was observed that the mean healing period was between 31 to 180 days and was associated to the male gender ($p=0.030$) (Table 4).

Table 5 - Comparison of evaluation parameters for temporary trauma and age range

Temporary damage		Idade								p
		15 or less		16 to 30		31 to 46		over 46		
		n	%	n	%	n	%	n	%	
QD	Very quick	1	7.7	-	-	2	11.1	2	12.5	0.013*
	Quick	-	-	3	17.6	1	5.6	5	31.3	
	Moderate	1	7.7	8	47.1	6	33.3	7	43.8	
	Medium	8	61.5	3	17.6	7	38.9	2	12.5	
	Delayed	3	23.1	3	17.6	2	11.1	-	-	

* significant $p \leq 0.05$

The only variable significantly associated to age was the *Quantum doloris* where the category “quick” was related to the over 46yo group and the medium category to the 15 or less group ($p=0.013$) (Table 5).

Permanent corporal damage items

Table 6 – Description of parameters related to permanent damages

Permanent damage	Category	Cases	%
ED	0	16	25.0
	Very Quick	13	20.3
	Quick	20	31.3
	Moderate	6	9.4
	Medium	8	12.5
	Considerable	1	1.6
PAI ¹¹	Compatible	50	78.1
	Compatible to efforts	14	21.9
SAI	0	62	96.9
	Moderate	2	3.1
SLAI	0	46	71.9
	Very Quick	6	9.4
	Quick	7	10.9
	Moderate	4	6.3
	Very Important	1	1.6
Dependencies	Absent	57	89.1
	Present	7	10.9
FD	Absent	48	75.0
	Present	16	25.0

¹¹PAI – professional activity impact corresponds to the consequences of the sequelae in the professional activity that the victim was able to develop in the time of the traumatic event. There is the following situations:

1. be compatible with the exercise of professional activity;
2. be compatible with the exercise of professional activity , but implies additional efforts;
3. be impeding the exercise of professional activity, however being compatible with other professions in the field of technical and vocational preparation;
4. be impeding the exercise of professional activity, as well as any other in the area of technical and vocational preparation.

Table 7 – Comparison of parameters for assessing permanent damage between genders

		Gender				P
		Female		Male		
		n	%	n	%	
Permanent damage	Category					
Dependencies	Absent	32	82.1	25	100.0	0.025*
	Present	7	17.9	-	-	

* significant $p \leq 0.05$.

In addition, gender was associated to the *dependence* category, where a significant association with *Absence* was observed in men while *presence* was correlated to women ($p=0.025$) (table 7).

Table 8 – Comparison of parameters for assessing permanent damage among age ranges

Permanent damage		Idade								p
		15yo or less		16 to 30yo		31 to 46yo		Over 46yo		
		n	%	n	%	n	%	n	%	
SAI	0	11	84.6	17	100.0	18	100.0	16	100.0	0.039*
	Moderate	2	15.4	-	-	-	-	-	-	
SLAI	0	7	53.8	10	58.8	16	88.9	13	81.3	0.026*
	Very quick	3	23.1	1	5.9	-	-	2	12.5	
	Quick	-	-	4	23.5	2	11.1	1	6.3	
	Moderate	3	23.1	1	5.9	-	-	-	-	
	Very Important	-	-	1	5.9	-	-	-	-	
FD	Absent	5	38.5	13	76.5	16	88.9	14	87.5	0.010**
	Present	8	61.5	4	23.5	2	11.1	2	12.5	

* significant $p \leq 0.05$; ** not significant $p \leq 0.01$

Tests results highlighted that the variables related to age were (Table 8):

- SAI: Significantly associated to the *moderate* category in the 15yo or less ($p=0.039$).
- SLAI: Significantly associated to the *moderate* category in the 15yo or less ($p=0.026$).
- FD: Significantly associated to the *present* category in the 15yo or less group ($p=0.010$).

The non-parametric tests of Mann-Whitney and Kruskal-Wallis results demonstrated that there were no significant difference of PFD was observed between genders or age groups, respectfully.

Discussion

The reported results show a predominance of male victims, in accordance to previous researches (12-14). Male individuals being potentially more exposed to suffer some kind of trauma are not under any kind of natural order, but are mostly due to cultural factors (15). Middle age men, between 21 and 40 years old, are more likely to be involved in car accidents and aggressive incidents than women, and the most affected body parts are the nose, the zygomatic complex and the alveolar bone, due to the position of these anatomical features in the face.

The etiology of the facial trauma is varied, and teeth are particularly more exposed and vulnerable, especially in two circumstances: Traffic accidents and violence (14). Traffic accidents were the primary cause of facial trauma in 73.5% of the total injuries (Car accidents 54.7% and pedestrian run over 18.8%), also in concordance to other reports (4, 13, 15). Violence represented 12.5%, but other studies reported some variation in this etiological factor, stating that injuries related to aggressive behavior are more frequent than traffic injuries (16). In addition, the importance of educational and preventive actions within the community has high level of importance.

A study on car accidents in the city of Porto – Portugal (13) reported that oral-facial injuries might lead to various consequences in the long term. The most frequent injuries were at the oral soft tissues, with a 38.6% prevalence from all corporal sequels ($n=194$). Those could lead to functional or on aesthetical damages. Injuries to dental or periodontal tissues were the second most prevalent, but were the main cause for permanent sequels (46.7%) which agreed with our findings.

It is common sense, among populational studies, that coronary fractures are the most prevalent dental trauma, and it is frequently left without proper

treatment (17-20). Referring to Andreasen's trauma classification criteria (17,21), we can suggest that coronal dental trauma may be evaluated as a body injury, as it is observed in 21.9% of our sample and in 8.9% of the total injuries of the study in the city of Porto (13). Until the present date, it has not been considered an injury in the "National Evaluation of Permanent Incapacities Table on Civil Law" issues (22), which is responsible to give value to permanent sequels of the physical and psychiatric integrity on each case. Fractures to the dental crowns, particularly involving the enamel, affect a tissue that does not regenerate after tooth eruption and its restoration or repair cannot *restitutio ad integrum* the individual. This value of incapacity may vary according to the material choice for rehabilitation and the use of direct or indirect restoration.

Many studies (23-29) focus on orofacial trauma and not its outcomes. Nevertheless, the follow-ups of those injuries are extremely important for a correct evaluation, rather in the clinical or forensic environment.

Facial traumatism can leave permanent functional and aesthetical sequels. The face, more than any other body part, is critical for aesthetic alteration, as it is usually visible at all times, any deformities are instantly noticeable. According to our data, 39.1% of the reports described some kind rehabilitation (dental Implants, fixed and removable prosthetics) at the moment of the evaluation, which suggests a preoccupation with both function and aesthetic and a demonstration of how those injuries can affect the victim's life (15).

In this research, the healing period was found to be over 180 days (43.9%), but the time that victims were unable to work and away from normal activities was less than 30 days. To evaluate the extension of the incapacities of a person with facial deformities is a difficult task, as three aspects occur simultaneously: Functional, anatomical and social (10). A rehabilitation of the orofacial traumatism can demand long term specialized treatment, what would create special limitations, as the individual can be physically ready for general activities, but not psychologically.

In the dentistry field, the estimated period for the execution of a complex rehabilitation may depend on laboratory procedures or orthodontic treatment, what can extend the healing time (*restitutio ad integrum*). This explains the long mean intervals of incapacity found.

On the other hand, the introduction of new technologies, by scientific community, can readjust the parameters for evaluation already stated, highlighting the necessity of extra evaluation, intermediary or after the previous value statement (PFD).

Throughout the years, the evaluation of body damage healing time in relation to the rehabilitation technologies and the event severity has increased,

with the necessity of intermediary evaluation, or a total reevaluation of the incapacity value stated (PFD). This reevaluation is related with a view of a more updated reality of the integrity of an individual in the society and in his professional activities. In this study, the future damage was significantly associated to the 15 or less age range, which demonstrates a concern with the uncertain outcome of some dental lesions.

From values statements for permanent incapacity we found a mean of 21.7 for body damage and 6.6 for isolated dental injuries, in concordance to previous research that described a 20.5 and 9.4 points respectively (13).

The cited research, carried on in the city of Porto (13), also evaluated the emotional impact of orofacial injuries, as observed in this research, the *Quantum doloris* was assigned in all cases. The maximum category found in the cited study was a 7 point (very important), while in this investigation the maximum was a 5 point (considerable). Nevertheless the mean values were compatible (3.45 (SD 1.6) and 3.27 (SD 1.1), respectfully).

The dependences can be temporary or permanents, as the most frequent value assigned for the permanents (1, 30, 31). These dependences can be related to several necessities, as the need for medicines, regular medical treatment, technical help, domestic adaptation and hiring of professional care (1). In this study the attribution of dependences was significantly higher in the female gender, and can be justified by the complexity of the lesions and the fragility of their biotype.

Our findings support that orofacial damage has less evaluation parameters than general body damages, what represents a smaller incapacity period, with less permanent consequences. Social-economic impact was also smaller, as reduced number of days of absence from work has less impact on the productivity loss also in concordance to previous results (13). We believe that more studies are necessary for more definitive conclusions.

Conclusions

The results show that traffic accidents play an important role as the cause of orofacial injuries. Tooth loss was the main buccal lesion, present in 56.3% of the cases. In the long term, these injuries may have severe consequences affecting different aspects of social and professional life of the victim.

The similarity observed in the decisions on every parameters evaluated, also statistically verified, indicates that the pre-establishment of a criteria leads to a more uniform forensic approach, avoiding frequent distortion of human judgment.

References

1. Vieira DN. Assessment of bodily damage in civil law: harmonisation of an expert protocol. *Rev Port Dano Corp.* 2003;12(13):29-36.
2. Lucas P, Bargagna M, Boróbia C, Béjui-Huges H, Streck W, Vieira D. La rationalisation de l'évaluation européenne des atteints à la personne humaine. *Rev Port Dano Corp.* 2001;10(11):21-35.
3. Boróbia C. Valoración del Daño Corporal. Legislación, Metodología y Prueba Pericial Médica. Barcelona: Masson; 2006.
4. Gassner R, Tuli T, Hächl O, Rudisch A, Ulmer H. Craniomaxillofacial trauma: a 10 year review of 9543 cases with 21067 injuries. *J Cranio Maxillofac Surg.* 2003 Feb;31(1):51-61.
5. França Caldas A, Burgos ME. A retrospective study of traumatic dental injuries in a Brazilian dental trauma clinic. *Dent Traumatol.* 2001;2001(17):250-3.
6. Rajab LD. Traumatic dental injuries in children presenting for treatment at the Department of Pediatric Dentistry, University of Jordan, 1997 - 2000. *Dent Traumatol.* 2003;19:6-11.
7. Traebert J, Peres MA, Blank V, Pietruza JA. Prevalence of traumatic dental injury and associated factors among 12-years-old school children in Florianópolis, Brazil. *Dent Traumatol.* 2001;17:250-3.
8. Sharma BR, Harish D, Sharma V, Vij K. Road-traffic accidents - a demographic and topographic analysis. *Med Sci Law.* 2001;41:266-74.
9. Pérez BP, Garrido BR, Sánchez JAS. Metodología para la valoración del daño bucodental. Madrid: Editorial Mapfre Medicina; 1996.
10. Magalhães T. Estudo tridimensional do dano corporal: lesão função e situação. Sua aplicação médico-legal. Coimbra: Almedina; 1998. 258 p.
11. Pedroni LBG, Barcellos LA, Miotto MHMB. Tratamento de dentes permanentes traumatizados. *Pesquisa Brasileira em Odontopediatria e Clínica Integrada.* 2009;9(1):107-12.
12. Bastos KABS. Análise da ocorrência e classificação penal das lesões maxilofaciais do Instituto Médico Legal do Município de Taubaté [dissertação]. São Paulo: Universidade de São Paulo; 2005.
13. Caldas IM, Magalhães T, Afonso A, Matos E. Orofacial damage resulting from road accidents. *Dent Traumatol.* 2008 Aug;24(4):410-5.
14. Caldas IM, Magalhães T, Afonso A, Matos E. The consequences of orofacial trauma resulting from violence: a study in Porto. *Dent Traumatol.* 2010 Dec;26(6):484-9.
15. Cardozo HF. Verificação da ocorrência de traumatismos faciais e de elementos dentários, ocupantes de acidentes de trânsito [dissertação]. São Paulo: Universidade de São Paulo; 1990.
16. Loducca FE. Estudo epidemiológico dos traumatismos de face, causados por acidentes de trânsito, em serviço de cirurgia e traumatologia buco-maxilo-facial do município de São Paulo [tese]. São Paulo: Faculdade de Odontologia da USP; 1997.
17. Raphael KG, Marbach JJ, Klausner J. Myofacial face pain. Clinical characteristics of those with regional vs. widespread pain. *J Am Dent Assoc.* 2000;131:161-71.
18. Okesson JP. Signos y sintomas de los trastornos temporo-mandibulares. In: Okesson JP, editor. Tratamiento de Occlusion y Afecciones Temporomandibulares. Madrid: Harcourt Brace de España; 1999.

19. Andreasen JO, Mayne JR. Traumatic injuries of the teeth. *Australian Endodontic Newsletter*. 1982;8(2):18.
20. Kramer PF, Zembruski C, Ferreira SH, Feldens CA. Traumatic dental injuries in Brazilian preschool children. *Dent Traumatol*. 2003 Dec;19(6):299-303.
21. Grimm S, Frazão P, Antunes JL, Castellanos RA, Narvai PC. Dental injury among Brazilian schoolchildren in the state of São Paulo. *Dent Traumatol*. 2004 Jun;20(3):134-8.
22. Granville-Garcia AF, de Menezes VA, de Lira PI. Dental trauma and associated factors in Brazilian preschoolers. *Dent Traumatol*. 2006 Dec;22(6):318-22.
23. Andreasen JO, Andreasen FM, Andersson L. Textbook and color atlas of traumatic injuries to the teeth: Wiley-Blackwell; 2007.
24. Tabela nacional de avaliação de incapacidades permanentes em direito civil. Decreto Lei nº352/2007 de 23 de Outubro; 2007.
25. Ogini FO, Ugboke VI, Ogundipe O, Adegbehingbe BO. Motorcycle - related maxillofacial injuries among nigerian intracity road users. *J Oral Maxillofac Surg*. 2006 Jan;64(1):56-62.
26. Gopalakrishna G, Peek-Asa C, Kraus JF. Epidemiologic features of facial injuries among motorcyclist. *Ann Emerg Med*. 1998 Oct;32(4):425-30.
27. Tuli T, Hachl O, Rasse M, Kloss F, Gassner R. Dentoalveolar trauma. Analysis of 4763 patients with 6237 injuries in 10 years. *Mund Kiefer Geichtschr*. 2005 Sep;9(5):324-9.
28. Gassner R, Bösch R, Tuli T, Emshoff R. Prevalence of dental trauma in 6000 patients with facial injuries. Implications for prevention. *Oral Surgery, oral Medicine, Oral Pathology, Oral Radiology, and Endodontology*. 1999 Jan;87(1):27-33.
29. Adeyemo WL, Ladeinde AL, Ogunlewe MO, James O. Trends and characteristics of oral and maxillofacial injuries in Nigéria: a review of the literature. *Head Face Med*. 2005 Oct;4(1):7.
30. Van Beck GJ, Merckx CA. Changes in the pattern of fractures of the maxillofacial skeleton. *Int J Oral Maxillofac Surg*. 1999 Dec;28(6):424-8.
31. Olasoji HO, Tahir A, Arotiba GT. Changing picture of facial fractures in northern Nigéria. *Br J Oral Maxillofac Surg*. 2002 Apr;40(2):140-3.
32. Magalhães T, Pinto da Costa D. Avaliação do dano na pessoa em sede de Direito Civil. Perspectivas actuais. *Rev Fac Direito Univ Porto*. 2007;4:421-54.
33. Alonso Santos JA. Avaliação do Prejuízo Estético. In: Vieira D, Quintero J, editors. Aspectos práticos da avaliação do dano corporal em Direito Civil. Coimbra: Imprensa da Universidade de Coimbra; 2008. p. 242.

Acknowledgements

To CAPES (Improvement Coordination of Higher Education Personnel) for funding this research;

to Faculty of Medicine (University of Coimbra) and National Institute of Legal Medicine and Forensic Sciences of Portugal.

Resumo: Avaliação de sequelas odontológicas em perícias cíveis

A avaliação do dano corporal no âmbito do direito civil constitui uma área de intervenção pericial cada vez mais relevante no âmbito da clínica forense. A realidade das perícias realizadas no Brasil tem sido bem diferente das utilizadas nos países europeus, que, mesmo com algumas diferenças, acabam por ter o mesmo princípio fundamental, baseando-se em tabelas de incapacidades e parâmetros de avaliação do dano civil. A ausência de definição destes parâmetros, no Brasil, possibilita divergências à medida que dá liberdade ao perito para que este expresse no laudo sua própria forma de realizar a perícia. O objetivo deste trabalho foi verificar parâmetros de avaliação de danos corporais da metodologia portuguesa de avaliação de danos em perícias odontológicas. O estudo consistiu em uma análise dos relatórios periciais (n=64) produzidos entre os anos de 2002 e 2011, do Instituto Nacional de Medicina Legal e Ciências Forenses (IP) nas suas Delegações Centro (Coimbra), Norte (Porto) e do Sul (Lisboa), em que foi atribuída a valorização de danos odontológicos. A maioria dos indivíduos eram mulheres (60,9%) e a média de idade foi de 32,83 anos. Acidentes de trânsito foram a principal causa das sequelas odontológicas (54,7%) e as agressões, significativamente associadas ao sexo masculino, caracterizando a perda dentária a lesão mais frequente (56,3%). O tempo de consolidação das lesões foi superior a 180 dias (43,8%), mas o tempo de afastamento das atividades gerais e de trabalho foi de até 30 dias. O *Quantum Doloris* atribuído foi de 3 a 4 pontos (65,7%) numa escala crescente de 7 graus, embora em nenhum caso tenha sido atribuída a valorização máxima (pontos 6 ou 7). Em 25% dos casos, o dano estético não foi considerado e, em 51,6% dos casos, foi pontuado entre os graus 1 e 2. A média da porcentagem atribuída ao Déficit funcional permanente foi de 6,63%. O dano futuro foi considerado em 25% dos casos e esteve, significativamente, associado à faixa de idade até 15 anos. Concluiu-se que o dano orofacial envolve menos parâmetros de avaliação de danos que os danos corporais globais, o que representa um menor período de deficiência, com menos consequências permanentes, com um impacto socioeconômico menor em termos de dias de trabalho e diminuição da produtividade perdida. A semelhança nas decisões em todos os parâmetros avaliados, observadas estatisticamente, indica que a definição de critérios propicia uma abordagem pericial mais uniforme, evitando, assim, distorções frequentes.

Palavras-chave: Odontologia legal; perícia odontológica; legislação odontológica; dano - responsabilidade civil.

Abstract: Assessment of dentistry sequelae in civil expertise

The assessment of the body damage in the scope of civil law constitutes an area of expert intervention each time more relevant in the scope of the forensic clinic. The reality of the expertise performed in Brazil has been different from the one in the European countries, which even with some differences have the same fundamental principle, being based in tables of incapacities and parameters of the civil damage evaluation. The lack of definition of these parameters in Brazil allows divergences while it gives freedom to the expert to express his or her own way to perform the expertise in the report. The aim of this study was to verify assessment parameters of body damages of the Portuguese methodology of the damage

evaluation in dentistry expertise. The study consisted in an analysis of the expert reports ($n = 64$) produced between 2002 and 2011, from the National Institute of Legal Medicine and Forensic Sciences (IP) in its Branches (Coimbra), North (Porto) and South (Lisbon), in which the valorization of dentistry damages was assigned. The majority of individuals were women (60.9%) and the age average was 32.83 years old. Traffic accidents were the main cause of these sequelae (54.7%) and the aggressions were significantly associated to the male sex, being the dental loss the more frequent lesion (56.3%). The consolidation time of the lesions was superior to 180 days (43.8%), but the time away from general activities and work was until 30 days. The attributed *Quantum Doloris* was from 3 to 4 points (65.7%) in a growing scale of 7 grades, although in no case the maximum valorization has been assigned (points 6 or 7). In 25% of the cases, the aesthetic damage was not considered and in 51.6% of the cases, it was punctuated between the grades 1 and 2. The average of percentage of permanent functional deficit was 6.63%. The future damage was attributed in 25% of the cases and it was significantly associated to the age period until 15 years old. It has been concluded that the orofacial damage involves less parameters of damage assessment than the global body damages, that represents a shorter period of deficiency, with less permanent consequences, with a smaller socioeconomic impact related to work days and decreasing of productivity that has been lost. The similarity of the decisions in all statistically observed and evaluated parameters shows that the criteria definition provides an expert approach more uniform, thus avoiding frequent distortions.

Keywords: Forensic dentistry; dentistry expertise; dental legislation; damage liability.

Pedido de separatas

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