

**CIVIL LIABILITY IN
ENDODONTICS:
EDUCATIONAL
ANALYSIS**

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Abstract: Introduction: the professional practice of endodontics presents complexities that need to be elucidated to be considered in civil liability processes. Objective: to elucidate endodontics educational association as an obligation of means in civil liability. Materials and Methods: a literature review and analysis of issues involving the objective were carried out. Results and conclusions: a discussion emerges in order to guide dentists and jurists about interurrences that need to be framed as an obligation of means and are often designated as an obligation of results, without taking into account the limitations that are inherent to patients and also to the endodontic conducts recommended by the scientific literature. Conclusion: perspectives emerge in the context: health, dentistry and educational legal interaction, for the development of essential assessment tools for each of the stages of the processes.

Keywords: Civil Liability, Dentists, Lawyers, Endodontics, Health Outcomes.

INTRODUCTION

The professional practice of dentistry in Brazil is backed by Law 5081/1966 and the Code of Dental Ethics, of the Federal Council of Dentistry, of 2012. In view of the normative criteria, the link regarding the civil liability of the dental surgeon is in a relationship legal obligation, in view of its liability to be directly related to acts performed in professional practice¹.

Civil liability can be subjective or objective and what differs between the two is the foundation². In the subjective, the grounds are: guilt (imprudence, negligence or malpractice) and willful misconduct. In the objective, the fundamentals are the law and the risk of the activity. Both the Civil Code (articles 927 and 951) and the Consumer Defense Code (§4 of article 14) require the analysis and proof of the agent's guilt. This way, the dental professional

will only be condemned if the guilt is proven^{2,3}.

As for the obligation, it can be of means or result². The obligation of means refers to the means used to achieve an end. The obligation of result, in turn, requires the fulfillment of the purpose proposed when the service was contracted^{2,4}.

The appointment of the obligation as a means or a result depends on odd factors: complexity of the proposed treatment, health and behavioral conditions of the patient, contractual clauses created, Informed Consent Form⁴ carried out for the case in a specific way, the behavior of the parties, the objective good faith⁵.

In recent years, the search for a solution in Justice, regarding medical and dental failures, has been growing significantly. Therefore, it is opportune to punctuate questions about the subject for educational purposes, intended for dentists and jurists^{2,4,5 e 6}.

Endodontics is the specialty of Dentistry responsible for the study of the dental pulp, the entire root canal system and periapical tissues, as well as the diseases that affect them⁷. Endodontic treatment consists of numerous technical maneuvers with medium and high degree of difficulty in execution. They aim to restore tissue health, keeping the dental element rehabilitated⁸. Complex maneuvers guided by radiographic exams or CT scans are performed in this treatment, with the aim of sanitizing inflammation and infections of the root canal system. Clinical signs and symptoms such as: swelling, pain, trismus, fistula; may appear during the process to restore dental health and are closely related to the patient's systemic conditions^{7,8 e 9}.

Endodontic failure can be defined as: inability of endodontic treatment to eliminate existing microorganisms in the Root Canal System, making this residual microbiota incompatible with the individual's health status and making it impossible to repair

periradicular tissues, resulting in the existence of periradicular lesions. after treatment^{10,11}.

There is great confusion when designating the failures of endodontic dental treatments as error, negligence, recklessness, complications, accidents, interurrences¹².

It must be noted that the very diverse anatomy, the curvatures and anatomical situations with a lot of variation, when treated, require a lot of study, technology and professional experience, as well as awareness of both the professional and the patient¹³. In other words: Endodontics is in Civil Liability; as for the obligation: therapy of means and not of result ².

MATERIALS AND METHODS

The description of endodontic complications and their implications was defined as methodology, with the intention of associating them to the conditions of civil liability of means and results. A literature review was carried out, defining the most described complications in endodontics with civil liability actions, with emphasis on responsibility of means and results.

Considerations that configure facts are of unique importance for the definition of legal proceedings in the face of endodontic interurrences. Among them are:

1- Endodontic instrument fractures

Fracture of endodontic instruments is a common complication in Endodontics due to the variable and versatile anatomy of the root canals (Brown & Herbranson, 2005)¹⁴, within the contexts of race, sex, upper or lower arches and hemiarchs or even between the roots of the same tooth^{14,15}. Failures resulting from endodontic treatments are much more related to the presence of the microbial factor than to instrument fractures¹⁶. Several means for removing instruments were protocolled, among them: removal using ultrasonic tips (mainly cervical and

middle thirds), rotary devices developed for this procedure, endodontic surgery (access to the fractured instrument); all aimed at maintaining the healthy dental element in the oral cavity¹⁷. Fracture of instruments must be considered a common occurrence due to the complexity of the treatment, and not inherent to the professional's will. Factors need to be considered: dental anatomy of the patient, type of instrument used and patient collaboration in the transsurgical process. These variants do not allow predicting such an accident.^{15, 16, 17 and 18}.

2- Extravasation of endodontic filling material

Periapical reactions related to extravasation of endodontic filling material have been studied for years¹⁹. The obturation of the root canals is proposed so that there is a hermetic filling of the place that was previously occupied by the pulp, removed by the instrumentation process of the canal. The materials used are usually gutta-percha surrounded by sealer cement. There are available cements based on zinc oxide and eugenol, calcium hydroxide, resin cements and, nowadays, bioceramic cements²⁰.

The possibility of cement leakage is involved with the whole context of the difficulty of endodontic treatment. Some regions of the dental arch are more complex and require more attention. Regions close to the Maxillary Sinus and regions to the Inferior Alveolar Nerve. Studies show possibilities of immunological reactions that may or may not present pain, as a result of extravasation and are related to the intensity and type of filling cement used. Immediately after extravasation, adverse reactions may occur, however; after completion of the procedure, according to the vast literature, there are no injuries, since they are biomaterials and some of the bioceramic cements are also bioactive, that is, they drive organic regeneration²¹.

3- Persistent periapical infections

Persistent infection is one that, as the name implies, remained, despite disinfection procedures and drastic changes in the microenvironment, after the use of intracanal medications, irrigating substances and the action of mechanical instruments²². Its etiology is associated with both the microorganisms of the primary infection and those of the secondary infection. Persistent infection is considered to be the main cause of most endodontic problems, such as persistent exudation and symptomatology, *flare-up* (aggravations) and failure of endodontic treatment²³.

Siqueira²⁴ through analysis with a culture method and molecular biology, they detected 103 species of bacteria and 6 species of fungi present in the endodontic, even after instrumentation and intracanal medication. In the samples after endodontic treatment, five phyla and 41 genera were observed, with the largest number of species found being: *Firmicutes*, Followed by *Proteobacteria* and *Actinobacteria*. In view of these findings, the authors concluded that such microorganisms directly interfere with the success of endodontic treatment. Microorganisms such as *E. Faecalis* are able to remain in a latent state, with a shortage of nutrients for long periods, and may become viable and pathogenic again, when microenvironmental conditions become favorable (patient immunity)²⁵.

RESULTS/DISCUSSION

Given the complexity of endodontic treatment and its main complications, it is essential to encourage educational practices in order to establish a link between legal responsibility and the dental professional, especially the endodontist, in relation to the importance of knowledge, gained through associated educational means. to health, as well as the development of strategies for

consolidating medical records and establishing the patient's consent, when in the treatment planning phase, with the structuring of complete and recorded documentation.

Although Dentistry has been considered by legal doctrine as an obligation of result, the Courts understand the need to verify guilt, in professional responsibility². When there is failure in the proposed treatment, the professional is the one who must prove that he did not act with guilt (the dentist's presumption of guilt)^{1,2,3 e 4}. This question becomes irrelevant, as the professional will have the duty to bring to the case, when legally cited, the evidence available to him⁵. Therefore, it is up to the professional to always remain in a position to prove, if necessary, his suitability, knowledge and technical capacity, dedication to the patient and organization^{2,6}.

It is important to discuss the issue when it comes to the Endodontics specialty, which can clearly be called an obligation of means and not of result, given the numerous complications that may occur inherent to the will or technical competence of the Dentist². The problem that involves a situation of failure of endodontic treatment punctuates numerous factors that escape the domain of the performer of the procedures, among them the differentiated anatomy and regions to be treated stand out^{7,8}.

In an avalanche of lawsuits in recent years, there is a clear perception of controversy between recklessness, malpractice, dental error and complications during procedures performed. Much is discussed about the guilt of the dentist and little is clarified about the patient's immune response to the treatment performed²⁵. Or still nothing is clarified about the variations of dental anatomy of each patient or behavioral particularities of these^{14,15}. They forget about the medium and high degree of difficulty in performing an endodontic procedure, performed blindly,

guided only by radiographs, microscopy or CT scans²⁰. An educational analysis of those involved is extremely important to distinguish between such circumstances².

Professional actions that make negligence explicit are highlighted in a timely manner: a dentist who uses an instrument improperly, fracturing it inside the root canal. Or imprudence and malpractice when performing a treatment without the proper care that the act requires, putting the patient's health at risk. These issues must be thoroughly evaluated by judicial experts, in order to clarify and precisely punctuate the dental error committed. Therefore, Civil Liability is subjective; the law determines the obligation to repair the damage done, regardless of whether the dentist is at fault²⁶.

An important issue to be addressed within this legal context is the recorded documentation of the patient to be treated⁵. A thorough, well-clarified, signed and dated anamnesis, with radiographic and tomography exams are of fundamental importance to avoid lawsuits. Informed Consent Form and all guidelines related to care must be signed by the patient or guardian²⁷. The dentist must provide all clarifications to the patient and family when necessary, pertinent to the procedure to be performed; in an enlightening way, communication being a fundamental factor for success⁵. Health professionals and jurists who will evaluate complex cases need a new work methodology that can provide more information about complications during treatment^{4,5 and 6}. Education is a strong tool to minimize these procedural issues^{28,29}.

CONCLUSION

Evolution in both scope and definition requires that health care decisions be based on the best available, current, valid and relevant evidence. These decisions must be taken by caregivers, informed by tacit and

explicit knowledge, in the context of available resources. Judicial expertise involving both endodontics and other areas of dentistry are of fundamental importance to clarify the issues raised by patients and lawyers. The perspectives emerge in the context: health, dentistry and educational legal interaction, for the development of essential assessment tools for each of the stages of the processes, developed, validated and made available.

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