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DEFENSIVE DENTISTRY FROM NORMAL MEDICAL PRACTICE TO SAFEGUARD FROM MALPRACTICE LITIGATIONS. NEW RULES IN COVID-19 PANDEMIC

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Abstract: Defensive dentistry, defined as dental care provided by professionals, aiming primarily to prevent the risk of litigation, has become, more and more, a popular choice among practitioners, in their daily practice, over the past decade. Being divided in "positive", when performing unnecessary diagnostic tests or prescribing unnecessary treatment and "negative", when avoiding high-risk patients or risky procedures, defensive dentistry's adverse effects raised the cost and lowered the quality of the healthcare provided for patients.

COVID-19 pandemic has changed the current clinical scenario in all medical practices, including dentistry, increasing the risk for performing defensive dentistry.

The aim of the present paper was to bring new insights into the field of defensive dentistry and to highlight the impact of COVID-19 pandemic on patient's treatment.

Pubmed/MEDLINE and Embase/SCOPUS databases have been revised for articles in English language using as keywords "defensive medicine", "defensive dentistry", and "Covid-19", "SARS-CoV-2", "Coronavirus" associated with "dentistry". The selected papers were critically assessed and corroborated with the changes occurred in the last months due to the high contagiousness of COVID-19 and the inherent risks for dental professionals, requiring multiple precautions during patient care or postponing patients treatments.

Defensive dentistry need to be recognized and avoid, as possible. Dental practitioners, their team, and patients, as well, need to adapt, based on evidence-based update of medical knowledge, to the new scenario created by the COVID-19 pandemic.

Keywords: defensive medicine, liability, SARS-CoV-2, pandemic.

INTRODUCTION

Defensive medicine, defined as medical care provided by physicians, aiming primarily to prevent the risk of litigation, has become, more and more, a popular choice among medical practitioners [1]. Being divided in "positive", occurring when physicians were performing unnecessary diagnostic tests and invasive procedure, prescribing unnecessary treatment and needless hospitalization and "negative", occurring when refuse to care high-risk patients or risky procedures on patients, who could have benefited from them, defensive medicine's adverse effects raised the cost, by overusing the medical resources, and lowered the quality of the healthcare provided for patients [1, 2].

In the dental field, so called defensive dentistry, is the avoidance of carrying out difficult or risky procedures which may damage the patient's health [3] or avoiding the treatment of difficult cases. Another neighboring concept is "the alteration of modes of clinical practice, induced by the threat of liability"[4]. In fact, the practice of defensive dentistry occurred due to the increase of lawsuits for medical negligence and malpractice in dental treatment, many legal firms, from countries such as United Kingdom (UK), USA or Canada, making it their public mission to find errors in

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dental work [5]. Defensive dentistry, in a similar way to defensive medicine, become a potentially serious threat to the way in which dental professionals think about, and deliver treatment to their patients.

Lately, due to the coronavirus disease 2019 (COVID-19), characterized as pandemic by the World Health Organization (WHO) on March 11th 2020 [6], the current clinical care dramatically changed due to the high risk of contagiousness of the severe acute respiratory syndrome-related to coronavirus 2 (SARS-CoV-2), leading to new concerns and a climate of insecurity in doctor-patient relationship.

Despite of the fact that dental professionals were familiar with cross-infection risks such as hepatitis B and C, but not limited to it, a graph published in March 2020, in New York Times, designated dentistry as one of the most exposed profession to the COVID-19 contagion [7]. Consequently, most of the countries, including Romania, suggested putting a pause to all non-urgent dental treatments, as preventive measure for minimizing the risk of disease transmission [8]. But the pandemic does not appear to end soon, moreover, globally, an increasing trend being registered, with 25.109.317 cases worldwide and 1.035.341 deaths, as reported by WHO on October 5th 2020, so innovative solutions need to be proposed to continue providing dental care during current pandemic and beyond.

Therefore, the aim of the present narrative review was to analyze defensive dentistry towards its influence on the quality of the treatment provided to the patients by the dental practitioner, considering its two aspects: positive and negative, with a highlight on the changes generated by the COVID-19 pandemic.

MATERIALS AND METHODS

Methods

Pubmed/MEDLINE and Embase/SCOPUS databases have been assessed for articles in English language using as key-words "defensive medicine", "defensive dentistry" and "Covid-19", "SARS-CoV-2", "Coronavirus" associated with "dentistry".

Regardless the great number of articles on defensive medicine (1872 with the established limits: 'English'[lang] and 'Human' [MeSH Terms]), for defensive dentistry a limited number of articles were found. For the search made on Pubmed/MEDLINE, using the key-word "defensive dentistry", 134 titles were identified and 32 papers were selected according to the title, 14 were retrieved as full text and examined; 12 papers (from 1976 to 1990, and articles from British Dental Journal before 1999) were not found and 102 titles were rejected. Embase/SCOPUS database search, with the same key-word, revealed 51 titles in English and, after removing duplicates, two new articles were selected. A total of 16 full text papers were examined and grouped as follows: editorials/opinions, dentist's opinion on defensive dentistry, and attitude towards patients requiring special care, positive and negative defensive dentistry.

The search using keywords "Covid-19", "SARS-CoV-2", "Coronavirus" associated with "dentistry" using Boolean operators OR, AND ((Covid-19 OR SARS-CoV-2) AND dentistry) revealed 1003 results, but only 8 when "defensive dentistry" was associated.

RESULTS AND DISCUSSIONS

Editorials/opinions on defensive dentistry

British dental Journal published in the last years (2005-2018) editorial opinions regarding defensive dentistry.

In the editorial published by Hancocks, an important aspect regarding the relationship between the dentist and the patient based on trust was highlighted [9]. Defensive dentistry was noticed mainly among young professionals, who seen their profession as "an incredibly litigious environment" where they felt vulnerable, stressed and upset. The effects of defensive dentistry is avoiding treatments that could reasonably be offered by the dental practitioner but wouldn't, due to the risk of a possible complaint, even with a valid consent signed by the patient [5]. Defensive dentistry means treatment "provided to patients for the benefit of dentists, not by dentists for the benefit of the patient"[10].

In United Kingdom (UK), according to the charity for patients safety and justice, Action against Medical Accidents (AvMA) database, the primary reason for patients to seek litigation is to gain an explanation for what has happened to them, and only 30-39% desire for financial recompense [11].

Dentist's opinion on defensive dentistry

In a pilot-study, Eijkman and co-workers, were the first to investigate whether defensive behavior occurs in dentistry and if so, how often and in what form; and secondly to discover which factors play a part in this situation [12]. 38 dentists were interviewed: 30 men and 8 women, mainly general dental practitioners. Defensive behavior occurred in dental practice, despite the fact that there was hardly any evidence of fear for malpractice

claims and lawsuits among the respondents (Dutch practitioners). Examples of unnecessary treatment performed: request for a gold inlay in a wisdom tooth; an X-ray which the dentist doesn't expect to reveal anything significant; treatment of a patient with serious temporomandibular (TMJ) disorders without expecting any useful results; providing a patient with dentures which, according to the dentist are not the right color; bleaching and polishing the front teeth of smokers; cleaning the teeth of a leukemia patient every week; prescribing antibiotics after a treatment with little chance of a post-operative infection; unnecessary sealing of deciduous molars, and so on. Examples of refraining from treatment: teeth being extracted in places where, from a professional point of view, crowns should be placed; necessary treatments being postponed or not performed at all, and nonprofessional treatment-plans being developed; avoiding patients with lack of motivation and poor oral hygiene. Referrals are performed mainly for financial reason and for difficult and non-coopering patients [12].

In a study investigating the potential risks of treatment and the dentist's attitude when performing treatment planning, carried out in UK on 12 participants, five practitioners of over 25 years' experience and seven practitioners of less than 5 years' experience, four types of attitudes to risk of the practitioners were identified: "There by the grace of God, go I" (when clinical errors occurred or unexpected outcomes were experienced, the practitioner felt relief that the patient accepted the situation, with no adverse follow up consequences); "Limitations on the scope of practice" (referrals of the patients to other dental colleague); "Fear" and "C'est la vie" (acceptance of the situation and getting on with it). The conclusions of the study were that dental practitioners in the UK preferred undertaken no-risk or low-risk type of interventions to their patients and also due to the fear of being sued, both experienced and less experienced dentists were limiting their scope of practice [3].

Attitude towards patients requiring special care

First available article defining defensive dentistry was published in 1991 by Burtner and addressed the defensive strategies of treating oral health of the residents of institutions for the developmentally disabled or mentally ill and comparing the service provided and regulations to the private practice [13]. For reducing personal vulnerability and to overcome the criticism of the state board, the so called "institutional dentists" were guided to apply the following defensive strategies: to follow the treatment guides provided by the Academy of Dentistry for the Handicapped, to develop a written treatment protocol signed by the medical director of the facility, and the state dental board, including the use of restrain, to document any interdisciplinary consultation, to avoid using sharp dental instruments to the very resistant patient without the use of physical or mechanical restraint [13].

Although is not officially recognized, dentists working in private practice constantly avoids treating patients with mentally disorders such as Down syndrome or Attention Deficit Hyperactivity Disorder (ADHD).

Defensive dentistry, similarly to defensive medicine, lay on the "crisis of trust" between the doctor and the patient, based on increasing patient's expectations from innovative treatments, motivated by regular searches on modern media such as internet [14]. People is encouraged to consider modern medicine as able to treat any disease, and doctors to behave opportunistically rather than doing what they think is really in the best interest of their patients [15].

When the relationship between the dentist and his patient works based on trust and the patients believe that his doctor is doing his best for him, providing the best advice for his individual needs based on the dentist's knowledge, skill and experience, the best medical care could be provided, without the pressure of an uneventful malpractice litigation.

Defensive dentistry, mostly a conservative attitude towards the growing number of medical negligence and malpractice litigations, tends to reduce quality of the treatment provided by the dentist and to increase the treatment's cost, both through positive and negative components.

Some examples of positive defensive dentistry refer to extensive prophylactic antibiotic administration, following third molar extraction or dental implant insertion; cone beam computed tomography (CBCT) scan recommended for an uncomplicated third molar; or recommendation of full-mouth radiographs as standard procedure; biopsy for any soft tissue lesion, and so on.

Negative defense dentistry refers to avoidance of treating complicated or risky cases, extensive referrals to specialists, avoiding high-risk procedures (with regards litigation and regulatory complaint), or patients with mentally disorders, among others.

Defensive dentistry, born in the USA, where negligence lawsuits and tort actions are very frequent,

is likely to be more common in nations with a higher density of lawyers and recourse to tort lawsuits, such as UK, but is also present in the rest of Europe. The reaction of dental professionals toward the risk of malpractice litigations provides no benefit to patients and is more likely to result in private practices that focuses on professional risk management rather than a patient-centric approach [11].

The best way to fight defensive dentistry should be to restore trust with patients, the main source of professional satisfaction for doctors [15,16].

Impact of the novel coronavirus and the management of defensive dental practice during COVID-19 pandemic

Due to high risk of transmission of SARS-CoV-2 through droplet, fomite (contaminated surfaces) and direct contact, the face-to-face interaction with the patients, including examination, diagnostic and therapeutic interventions of the naso-oro-pharyngeal region, make the dental professionals susceptible to get infected or spread coronavirus infection. The risk is increased by the fact that asymptomatic individuals may also be involved in the spread of the virus.

Special disinfection of all surfaces need to be undertaken and protecting the surfaces of all equipment and instruments with single-use disposable barriers is mandatory to be performed in the dental setting, due to the SARS-CoV-2 persistence on surfaces for hours or up to few days, depending on the type of surface [17, 18]. A strict protocol of patients screening to identify potential high-risk COVID-19 patients, free contact assessing body temperature as well as fill in an epidemiological questionnaire would avoid nosocomial infection [8]. Aerosol-generating procedures should be minimized or scheduled at the end of day, intraoral X-ray examination should be replaced with extra oral dental X-rays, such as panoramic radiography or CBCT, rubber dams and high-volume saliva ejectors are strongly recommended [17] and mouth rinse need to be the done before any dental procedures, to reduce bacterial load [8]. For dental professionals, personal protection equipment is recommended: long sleeve fluid repellent gown, goggles or a full-face shield, and respiratory protective devices classified by the US National Institute for Occupational Safety and Health as N95 or according to European Standard (EN 149:2001) as FFP2, and FFP3, with minimum filtration efficiencies of the particles with a dimension up to 0.6 μm of 94%, respectively 99% [19]. All these procedures increased significantly the dental treatment cost, limiting patients' accessibility to dental care.

Moreover, during the first wave of SARS-CoV-2 pandemic, Ahmed *et al.* conducting a cross-sectional study on 699 dental practitioners from 30 different countries, by using an online survey, to assess the anxiety and fear of getting infected found 87% of dental professionals being afraid of becoming infected with COVID-19 from either a patient or a co-worker and a considerable number of dentists (66%) ready to close their dental cabinets until the number of COVID-19 cases declined [20].

As adapting measure for avoiding infection spreading, a trend of increasing digitalization (such as the use of digital impression instead of the conventional one) [21] as well as the incorporation of teledentistry to reduce the number of patients visits, was observed in daily practice [22].

Despite of the protective measured applied, dental professionals around the globe are in a state of anxiety and fear while working in their respective fields, due to the SARS-CoV-2 high contagiousness and its effects worsening day by day, leading to a climate of insecurity characterizing the relationship with their patients.

In conclusion, the COVID-19 pandemic increased the prevention protocols currently applied in dental practices worldwide. Patients and dental professionals need to adapt to the new measures for cross-infection prevention and also to comply with the unavoidable changes in dental treatment.

By accepting patients as partners and not as potential litigants, by offering them detailed explanations related to the treatment plan, communicating the benefits and risks, by obtaining their informed consent, with rigorous completion of the patient record, according to the treatment performed, the "offer" of the practitioners will succeed the "demand" of patients for a high quality medical care, predictable and safe, eliminating the practices of defensive dentistry.

Conflict of interest

The authors declare that they have no conflict of interest.

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