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CURRENT TRENDS AND ETHICAL CHALLENGES IN COSMETIC DENTISTRY

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Abstract: In recent decades, all cosmetic and dental cosmetic treatments have become an integral part of the patient's complex approach, in association with orthodontic treatments, orthognathic surgery and restorative dental treatments using new esthetic materials. Dental bleaching is the starting point in the field of cosmetic dentistry, but today it is associated with other procedures such as microabrasion, dental veneers, gingival contouring procedures, the use of all ceramic or zirconia based ceramic prosthetic restorations. All these new trends in cosmetic dentistry also come with challenges for the dentist, because the demands of patients are high, sometimes unrealistic. The most complete information of the patient, in the process of obtaining informed consent, truly understood, can be a solution to solve this ethical problem in terms of cosmetic dental cosmetic approach, along with compliance with detailed practice guidelines, which are increasingly elaborate today. In this way, subsequent accusations of medical malpractice can be avoided.

Keywords: cosmetic dentistry; trends; challenges; medical liability.

INTRODUCTION

The last decades have brought spectacular development in all fields of medicine, as a result of immense scientific and technological results and advances. Dentistry has undergone major changes in diagnostic and therapeutic approaches. The most relevant examples are the new methods of prophylaxis of carious lesions, minimally invasive treatment with modern materials, the increasing use of bioactive materials, the use of laser in dentistry, advances in deciphering the mechanisms of periodontal disease and its complex treatment, large-scale development of modern implantology[1].

Cosmetic and aesthetic dentistry

Beyond the main activity in dentistry, especially when we talk about a private dental clinic, it is necessary for the dentist to re-examine and redefine its role in order to meet the aesthetic needs of their patients. A significant change was the new orientation of contemporary dentistry in the direction of providing cosmetic and dental aesthetics services. This was a direct result of the evolution of dentistry, allowing dentists to perform conservative treatments and at the same time improving their patient's aesthetic appearance [2,3].

A beautiful, attractive smile has always been an important desideratum, sometimes even the main one, for the dentistry patients. They always hope that dental works will restore or even improve the appearance of their natural teeth. Today, taking full advantage of new materials and techniques, dentists can often meet and even exceed patients' expectations [4].

In fact, the beautiful appearance of the teeth is the expression of the desire - intensely induced in modern society - to look younger, more beautiful, healthier, stronger or "successful" [5]. Decades ago, patients went to the dentist's office to receive dental treatment, practically solving a dysfunctional situation or an emergency situation like pain, dental trauma

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or dental abscess. Today, dentists are increasingly becoming the professionals that patients turn to for an opinion and later for a dental maneuver to improve the appearance of their teeth. Orthodontic increasing practice in adults is a measure of this trend [6].

As such, today a dental practice offer must include cosmetic dental aesthetics, in order to meet the requirements of most patients and to be competitive in the market of specialized services.

At one point dental aesthetics was focused primarily on the treatment of tooth discoloration, but today the current tendency in patients demands is represented by the treatments for sound teeth and where there is not always a biological justification for therapeutic approach. The intense and sometimes even aggressive advertising of "mandatory beauty" forces people to conform to the standards of modern society, so as not to be excluded and marginalized [7]. Once considered the field of some pioneering specialists in cosmetic dentistry, dental bleaching or dental veneer treatments have today become a general trend in restorative dentistry.

Dental bleaching was the first approach in the field of cosmetic dentistry, but today it is associated with other procedures such as enamel microabrasion, dental veneers, gingival contouring procedures, the use of all ceramic or zirconia based ceramic prosthetic restorations which can offer extremely high aesthetic properties.

In recent decades, all dental aesthetic and cosmetic treatments have become an integral part of the patient's complex approach, in association with orthodontic treatments, orthognathic surgery, endodontics and the restorative dental treatments with new materials with excellent physiognomic properties, close to the appearance of dental structures[8]. At the same time, new partnerships have been established with dermatology or plastic and reconstructive surgery.

Dentist's challenges regarding cosmetic procedures

All these new trends in cosmetic dentistry also come with new challenges for the dentist, because the demands of patients are high, sometimes unrealistic. For example, in the case of some patients, one or two dental bleaching sessions in the dental office will produce results that seem almost miraculous. For other patients - and it is essential to identify them – dental bleaching may never be the only or the most appropriate approach. But for most patients who want a more attractive smile, bleaching has a variable dose of promise to improve the appearance, especially when used as an adjunct to other dental aesthetic procedures [9].

The first cosmetic dental treatments, in fact treatments for dental dyschromia(particularly in anterior teeth), were performed more than a century ago, with bleaching agents applied directly on the surface of the teeth or inserted into the endodontic space in non-vital teeth. The oldest bleaching agent reported to have been used was oxalic acid, described by Chappel in 1877[10]. In 1884 Harlan described what was considered to be the first use of hydrogen peroxide for dental bleaching [11].

Once it was established that this substance was the most effective bleaching agent, dentists turned their attention to finding ways to facilitate its absorption and rapid and deep penetration into the tooth structure. By accelerating the oxidation process, more spectacular results are obtained, but the biological aspects impose limits regarding the concentration / working time / intensity of the associated light radiation / the number of sessions used.

Ethical and medical liability challenges in cosmetic dentistry

Another kind of challenges related to cosmetic and aesthetic dental treatments are related to ethical problems obtaining a fully and really understood informed consent to avoid any malpractice allegations[12].

Esthetic dentistry is a field which is more sensitive than other medical areas to moral, ethical and consequently legal issues. All four principles of bioethics (respect for autonomy, nonmaleficence, beneficence and justice) are creating special obligations for medical staff [13].

When we are talking about the principle of respect for autonomy, we assume that the patient acts on the basis of his own moral values and personal beliefs. So, he has the right to have opinions, to make decisions and, why not, to ask for cosmetic improvments. In medical law, this principle translates into the patient's ability to act autonomously, informed and based on their own decisions, so we cannot act without the patient's informed consent. This seems to be the solution to possible future problems, the more complete the information, the lower the risk for the patient making an accusation. That is why that „partially informed consent" is a major problem in cosmetic dentistry and a well documentated one, associated with aesthetic questionnaires, are absolutely necessary.

The principle of non-harm (associated in medical ethics with the maxim: "primum non nocere") requires us not to intentionally cause unnecessary harm to the patient. Unfortunately, the "primum non nocere" ethical principle often seem to be ignored or conveniently forgotten. This principle includes both the obligation not to cause harm and also the obligation not to induce the risk of injury (negligence). The medical legislation stipulates the obligation of medical practice within the limits of competence. Very often cosmetic procedures are facing great dilemmas in respecting this bioethic principle as we are talking about medical maneuvers which are not prophylactic or therapeutic ones.

It is obvious that there is a growing pursuit for dental aesthetics, dentists and patients alike, but most of the time, patients agree the treatment without being properly informed about the destructive nature of procedures on solid tissue and dental structures for achieve what is desired. Dental medicine sometimes involves physical procedures with inherent risks of complications, which obviously attracts an increased risk of litigation [14].

Experienced dentists would agree that the less you intervene on your teeth for any cosmetic reasons, the lower the risk of failure or disappointment of the patient, as well as the risk of threatening litigation.

At the same time, they should be aware that patients of this type, who resort to "dental cosmetic" medicine, have much higher expectations for the results and doctors should not make promises, especially to patients who have unrealistic "cosmetic" expectations.

However, in medical practice according to the code of ethics, the dentist must do all „due diligence" (medicine is a profession of "diligence", not "result") and ensure that the professional decision he makes or medical maneuvers complies with professional rules and obligations [15]. But if the patient has an obvious prejudice and makes an accusation, it is very easy to reach an accusation of malpractice. Also, this is often the situation when the patient is dissatisfied with the esthetic procedures results and is not accepting the scientific arguments previously presented and explained about the possibilities and limits of these techniques. This comes from cosmetic dentistry mainly expected to meet all patients requirements, so the medical profession is considered of "results", not a diligence one as it is in fact. One of the most important ethical and legal issue of cosmetic procedures is related to the outcome and even more, the "certain guarantees" asked by the patients. Dentists have to know, before any aesthetic treatment decision, all patients expectations, even the unrealistic ones, in order to avoid a later disagreement with possible legal consequences for them.

In fact, the 6 th article of the deontological code regarding professional independence, states: "the doctor is obliged to insist and defend his professional independence, being forbidden any determination of the medical act or of the professional decision for reasons of economic or administrative profitability" [16]. Obviously, the dentists are facing an ethical and legal dilemma, the main target of the argument here. And if the patient has an obvious prejudice and formulates an accusation, the medical act ends most of the time with an accusation of malpractice.

Malpractice means non-compliance with the standard accepted by good practice; the degree of skill and knowledge that would have been expected from any other health care provider in similar circumstances. Standards of practice in medicine and dentistry ideally reflect scientific knowledge from protocols established by scientific methods.

Most of the time the aesthetic dental treatment is carried out in a private environment (private dental office) and the procedure is requested by the patient, but no matter where it takes place, the practice of aesthetic dentistry obviously leads us to a result-oriented medical act, sometimes motivated only by financial arguments [17-19].

Although most of the time these dental cosmetic procedures are done at the patient's request, from an ethical point of view, the dentist do not wants to cause long-term collateral biological damage in an attempt to help. As in most aspects of dental practice, there must be a balance between doing "aesthetic good" and causing long-term damage [20]. This critical balance is what we should keep in mind when talking about "cosmetic dentistry and ethics".

The principle of benefit, in which, we act to help or prevent harm, in other words, it imposes on physicians the obligation to act to help patients, not just to refrain from harm. This principle also differs from that of non-injury in that it is not a source of legal action in the event of non-compliance. In general, it is not at all recommended to raise the patient's expectations beyond "medical safety", otherwise the "risk-benefit" ratio, very easily and quickly, moves to "risk" [21].

In aesthetic dentistry the medical staff must carefully balance between advantages and potential short and long term disadvantages and initiate the cosmetic approach only when the benefit is much more

important than harmful side effects. Also the dentist is obliged to minimize them as much as possible.

In other words, the dentist must ensure that cosmetic or aesthetic dental treatment is minimally destructive in long term, so should act in the "best interests" of the patient. Therefore, it is completely unethical to respect the unrealistic wishes of patients, especially if the professional procedures are more or less destructive.

The "cosmetic" result, for instance dental bleaching, raises ethical issues, as much of this excessive treatment is sometimes unnecessarily destructive and goes against the healing and care principles of the dental profession [22]. Because the oral cavity is of great importance for individual aesthetics, sometimes other simple dental treatments or functional restorations can be considered for aesthetic purposes. Which led to an increase in patient expectations or dissatisfaction with the obtained results. On the other hand, there is an increasing number of dental medical procedures, which can be undertaken with adequate training, to improve the dental appearance of the patient without the need for destructive measures of dentistry [23]. When we are talking aesthetic and cosmetic dentistry, the 'risk-benefit' ratio must be carefully considered when comparing the actual potential aesthetic benefits to the many risks involved in these procedures.

Dental bleaching, although the most common dental cosmetic procedure, is not the only aesthetic approach encountered these days, another example would be the current fashion for "orthodontic appliances" that use quick methods to move teeth into unstable positions and then try to keep them there for a long time. Regardless of the promises made for "permanent retention", this technique is not entirely risk-free because giving up restraints can sometimes lead to returning to initial situation with all the associated complications. The same situation is related to so widely used today dental veneers [24].

Being considered by many to be just one aspect of current dental practice, modern restorative dentistry has aimed to treat dental lesions and improve and maintain function, but also to offer a more beautiful and healthier smile and facial aspect. This is very easy to be achieved using new biomimetic materials with excellent physiognomic qualities.

In essence, solving ethical problems from an ethical point of view requires detailed information of the various options available (including those that other specialized dentists could offer), associated with adequate training of the new techniques and the strict respect of the therapeutic protocols. This information is presented in the process of obtaining the informed consent of the patient. This procedure leads to the attenuation of the distinction between the obligation of means and the obligation of result, leading to the normal result expected by the patient. But a purely formal approach to obtaining informed consent increases the risk of litigation, especially when the unsatisfied patient perceives the situation as a deviation from the agreed outcome.

Informing the patient as completely as possible, within the process of obtaining informed consent, can be a solution to solve this ethical problem regarding aesthetic cosmetic dental approach, along with compliance with detailed practice guidelines which are increasingly elaborate today. The information provided by the dentist on these "biological costs" is made to sensitize the patient about the decision he will take, following the agreement for the treatment[25].

Discussions with the patient must include the advantages and disadvantages of all viable options so that the patient understands the consequences and limitations of the chosen options as well as the possible short-term and long-term failures [26].

In addition to the informed consent of the patient, somewhat excessive caution is required, thus providing the patient with exact details regarding the investigations performed and the results obtained. All of this should be recorded or possibly attached to the other clinical records (patient files for example), so their expectations, concerns, and hopes need to be explored very carefully. Excessive care given to these details (the lack of which can create a vulnerability dentist) can be life-saving in some cases in the event of a dispute [27].

Clearly, this field of dentistry is fraught with many dangers for the patient and even for the enthusiastic or experienced dentist. If things go in the wrong direction with excessive cosmetic dentistry or are considered unacceptable by the patient, then that dentist may become liable for all damages associated with the medical act.

Cosmetic procedures which are somehow dictated by the social needs, are unfortunately not available for all patients because of financial aspects. So the fourth bioethics principle, the justice, which states that the medical resources must be distributed according to needs, can not be fulfilled. Although romanian legislation currently allows selection criteria for patients who are currently accessing at the same time certain medical services or treatments if there is a restriction on access for financial reasons, this is

not possible in private dental who provide aesthetic procedures.

Today the aesthetic dentistry is an medical important field and dentists are confronted with the shift of medical beneficence (usually as a result of a medical treatment) or personal material beneficence to moral beneficence. The intrinsic character qualities, respect for the bioethics principles and professionalism of the dentist are the pillars for such a shift.

In conclusion, aesthetic dental treatments, among which dental bleaching is undoubtedly the most requested and used, have gone through various stages of evolution over time, each with its own challenges and limitations. Initially, aesthetic dental approaches were rather experimental, with no predictable outcome, and later became recognized for their effectiveness and safety. In modern times, both dental bleaching and dental veneers are common practices, with most dentists performing these procedures. The development of computerized, accessible techniques for dental practice becomes essential in communicating with patients, so that the expectations of the latter become realistic and in accordance with the results that can be obtained.

Conflict of interest

The authors declare that they have no conflict of interest.

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