

TREATMENTS' COMPLEXITY IN DENTAL CARE ASSISTANCE, URBAN VERSUS RURAL ENVIRONMENT - PRELIMINARY STUDY

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Abstract: When talking about dental assistance we actually refer to the prevention, detection and treatment of diseases of the oral and maxillo-facial region which, in most cases, have as a starting point or interest the dento-maxillary system. In this material, we tried to present a comparative study on the typology and complexity of different stages of dental treatments that can be performed in urban areas, compared to various stages of dental treatments that are performed and / or could be made in rural dental offices from in Romania.

INTRODUCTION

Dental care in urban areas is a very complex activity, usually of good quality, compared to rural areas. By the end of the last century (1998-1999), this was mainly due to a population in the rural area who were extremely uneducated and uninformed about the prevention and treatment of oral and dental diseases, due to the lack of financial possibilities corresponding to the same population in the rural area, as well as a poor training of dental specialists working in rural areas. This poor training of rural dentists was due in part to an extremely poor material endowment at the time (for example, there were areas without running water, where the installation of a dental unit was done in extremely difficult conditions at an inadequate water source, source provided by a submersible pump, sterilization equipment was obsolete; a dental x-ray usually meant a trip to a larger town where there were X-ray devices, town that could be even at extremely long distances from the residence), and on the other hand due to a rather difficult access to modern sources of information: internet, specialized literature, courses, congresses, conferences etc.

Currently, we consider that the access to information has been solved almost entirely by extending the coverage of the Internet to the entire territory of Romania (basically, today only if you don't want to, you don't inform yourself), and clinical-material endowments in dentistry in rural areas it has improved substantially, due to the transfer of dental services to the private sector (including dental laboratories and dental x-ray offices), which means in fact substantial investments of dental entrepreneurs in rural areas of Romania.

However, the discrepancy between the quality of dental treatments in urban areas compared to the same type of treatments in rural areas remains and is mainly due both to the lower training of dental professionals working in rural areas, aspect with which we, the authors, agree only to a rather small extent, as well as on account of very low financial possibilities of the rural population,

compared to the urban population in Romania. Of course, a certain lack of education of the rural population in our country regarding the prevention and treatment of diseases from oral and dental areas should not be excluded.

AIM

A characteristic of urban dentistry is a high patient demand (an average of 12-20 patients daily in the peak months), presented unevenly over time (large variations from day to day, but also within the same day).(1) Thus, the urban population, especially the adult population, shows a pronounced sense regarding the preservation of teeth on dental arches but, whose therapy requires it in most cases late, but insistently opting on rehabilitation prosthetics of existing edentations, including implant-supported rehabilitations.(1-5) Usually, fixed prosthetic restorations are required, because wearing of mobile prostheses is related to some people to the idea of aging. Practically, all types of prosthetic restorations, both mobile and especially fix, including implant-supported ones involve not only a very good professional training of the dentist, an excellent clinical-material endowment of the office where it takes place the activity of dentistry, but also the quick and easy access to high-performance dental laboratories, able to approach and carry out any kind of prosthetic restorations.(1-5)

Another type of demands that we find mainly in the urban population, refers to orthodontic appliances for teeth straightening, fixed and removable, especially in children, adolescents and young people. Specifically, specialists in orthodontics and dento-facial orthopedics are found concentrated in urban areas, knowing that this category of dentists performs treatments with a special complexity, especially since most of their patients are in the age range 5-18 years, which makes the collaboration between medical staff and patient more difficult, compared to the case of adult patients.(1-5)

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Regarding coronary fillings, even when discussing extensive coronary damage, patients in urban areas frequently opt for such conservative therapies, avoiding tooth extraction, a more radical therapeutic method frequently practiced in rural areas. (especially until the end of the twentieth century).(1-5)

Thus, these types of dental treatment requests that we frequently find in the urban population, is a common phenomenon for this category of patients, compared to patients from rural areas of Romania where, as mentioned in the introductory part, we discuss, at least in theory, about a population with fairly limited financial resources and training, in terms of prevention and treatment of diseases with oral and dental areas.(1-8)

AIM

Starting from the ideas presented so far, we tried to make a material regarding the complexity of different stages of dental treatments that can be performed in urban areas, compared to various stages of dental treatments that are and / or could be performed in dental offices from rural areas in Romania. In fact, the issues presented so far are both the purpose and arguments for conducting this study, even if it is a preliminary one. Specifically, in this material, we will discuss general and particular aspects of the way of carrying out the medical activity with dental profile, from the urban areas of our country.

MATERIALS AND METHODS

In the urban environment not only in Romania, there is a very large and unequal demand of the population for all types of medical services, but especially for dentistry, which results in a fluctuating activity, which does not allow a careful use of time and it is not very effective for performing complete and complex therapeutic acts, specific to dentistry.(1-5,9-13)

Thus, if the dentist lets himself involved in this activity, it ends up performing an insufficient examination of the patient and correct therapeutic acts, thanking himself with performing palliative treatments (sedative filling, temporary filling, halves or even fragments of therapeutic acts), things that lead both to a low quality, inefficient and sometimes harmful dental care, but also to the maintenance of overload.(1-5)

The examination, which requires at least some anamnestic data and a careful examination of the entire dento-maxillary system, requires a variable time, which can last between 15 and 30 minutes. But, the examination in dentistry can take even longer and for the fact that, most of the time, we are dealing with several conditions that require, each one, a careful investigation for a correct diagnosis. Thus, the examination in dentistry must be done in a single session and cannot be limited to an inventory of the various conditions found. In order to make a decision, they must be corroborated, in a synthesis that can be called "the state of the dento-maxillary system". This operation constrains us to record what was found in an examination form, which at this time has become mandatory, once with the informed consent of the patient. Based on the established diagnoses, the dental practitioner draws up the therapeutic indications, which he records in a therapeutic plan staggered in time, in phases. Only after such a complete examination, it is possible to proceed to a complete and complex dental treatment of a dento-maxillary system.(1-5)

Another problem that must be the basis for organizing the practical activity of dental care is represented by the practice of complete documents, completed correctly in the consulting session. Thus, in the complex dental care, which characterizes the activity of the dentist in the 21st century, there are a multitude of various therapeutic acts. These therapeutic acts are not identical to each other and the same therapeutic act is not identical for all teeth. This results in a varied time of performing these therapeutic maneuvers, a duration that also depends on the quality of materials and instruments used, but also on the skill and

conscientiousness of the dental practitioner. Thus, dental extractions, coronary and root fillings, as well as various therapeutic acts characteristic of different types of prosthesis (fix, mobile, etc.) cannot be considered to have the same value of time.(1-5) For an efficient dental care, with complete and complex therapeutic acts in the session, it is necessary to practice the planned sessions, reserving the time necessary to perform these acts, corresponding to the experience of the practitioner.(1-5)

But, planning patients for an effective dental treatment can encounter 2 quite serious difficulties, as follows:(1-5)

- It is complicated for a dentist working alone to precisely delimit the time of his planned therapeutic sessions, in relation to the cases that require at least an examination and, possibly, an emergency treatment;
- Scheduling requires strict compliance both by the dental team (dentist and nurse) and by patients. Failure to comply with the schedule can cause either congestion or gaps in the medical team's program, aspects that thus compromise the principle, based on which the model of planning therapeutic acts in the medical system of dentistry was introduced.

Depending on the type of dental condition for which the patient requests specialized treatment, most often there is an acute condition that caused him to request examination, and which requires immediate intervention. Basically, the dentist must be prepared to perform this therapeutic act or the dental service must be organized in such a way that the therapeutic act can be performed immediately. And this is usually a feature of dental services located in urban areas of Romania.(1-5)

Another criterion that must be taken into account in a dentistry service in urban areas of Romania, is the importance of the oral and dental pathological condition for the health of the individual. In this category, attention should be paid to the following issues:(1-5)

- firstly, chronic infections, which may be the cause of a systemic disease (outbreak), diagnosed or at least suspected;
- secondly, to pregnant women, whose state of dentition may influence the health of the mother and fetus; it is known that the more advanced the pregnancy is, the harder to bear the treatment;
- thirdly, to patients with ailments or disabilities can hardly stand dental treatment.

Starting from the previously mentioned aspects, important in order to carry out dental therapeutic maneuvers in urban areas, we compiled a 7-point questionnaire, which we applied to a number of 47 dentists, who work in the private sector from various urban regions in Romania, more precisely in large cities, such as Bucharest, Constanța, Pitești, Brașov and Râmnicu Vâcea. The study, with a preliminary character, took place between October 15 and November 15, 2019.

All subjects involved in the study were aged between 30 and 65 years, being distributed as follows: 25 of the subjects were females (53.19%), while the remaining 22 subjects were males (46.81%) (figure no. 1).

Next, we will present the 7 questions addressed to the study participants:

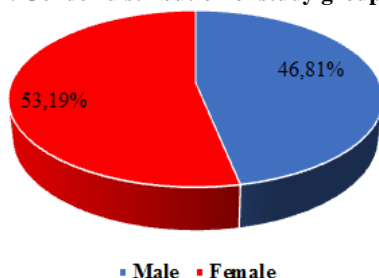
1. *What is the most important moment of a dental treatment?*
a. Follow-up care; b. Examination; c. Performing dental treatment; d. Establishing the dental treatment steps?
Correct answer: b.
2. *In how many treatment sessions should an appropriate dental examination should be carried out?* **a. 1 session; b. 2 sessions; c. 3 or more sessions?** **Correct answer: a.**
3. *In order to establish a diagnosis and to be able to develop a feasible treatment plan, the dentist performs the following steps:* **a. Performs an examination that lasts at least 15-30 minutes; b. Performs only a review of the general ailments from which the patient suffers; c. Performs the so-called**

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„state of the dento-maxillary system”, and records what he found in the observation sheet; **d.** Record the patient's informed consent; **e.** Based on the established diagnoses, he draws up the therapeutic indications, which he records in a therapeutic plan staggered in time, in phases? **Correct answers: a, c, d, e.**

4. One of the organizing problems of the practical activity of dental care is represented by: **a.** Performing complete and correct therapeutic acts in treatment session; **b.** Performing dento-alveolar surgery maneuvers, such as dental extraction, apical resection, etc., in time intervals between 20-45 minutes; **c.** Performing specific dental prosthetics maneuvers only in dental laboratories? **Correct answer: a.**
5. For an efficient dental assistance, with complete and complex therapeutic maneuvers in treatment session, it is necessary for: **a.** The practice of the planned treatment sessions, with the reservation of the time necessary to perform these acts, corresponding to the experience of the practitioner; **b.** Picking up patients as they arrive at the dentist's office, without prior appointment; **c.** As the dentist completes a therapeutic act, the next patient is asked by telephone to go to the office for specialized treatment? **Correct answer: a.**
6. Patient planning for efficient dental treatment may encounter the following difficulties: **a.** It is difficult for a dentist working alone to precisely establish the time of his planned therapeutic sessions, in relation to the demands that require at least an examination and, possibly, an emergency treatment; **b.** The programming requires a rigorous observance both by the dental team (dentist and nurse) and by the patients, in order to avoid both overcrowding and time gaps in the program; **c.** Collaboration with the dental laboratory is an insurmountable problem, in case of poor patient planning? **Correct answers: a, b.**
7. A criterion that must be taken into account in a dental service in urban areas of Romania, is the importance of the oral and dental pathological condition for the health of the individual. In this category, attention should be paid to the following issues: **a.** Chronic infections, which may be the cause of a systemic disease (outbreak), diagnosed or at least suspected; **b.** Pregnant women, in whom the state of dental health can influence the health of the mother and fetus; **c.** Patients with ailments or disabilities who are undergoing heavy dental treatment? **Correct answers: a, b, c.**

Figure no. 1. Gender distribution of study group



RESULTS

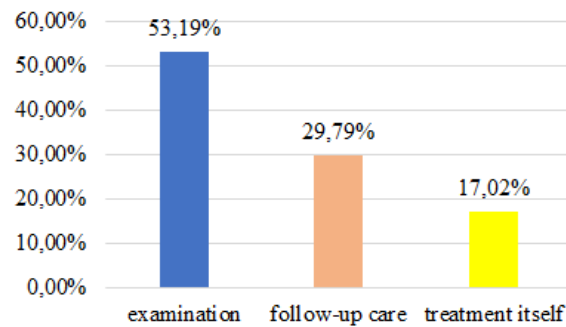
The analysis of the answers led to the following results:

The most important stage of dental treatment was correctly considered by most respondents: examination (25 representing 53.19%), while 14 respondents considered follow-up care and 8 respondents (representing 17.02%) the treatment itself (figure no. 2).

It is not surprising that all the specialists included in

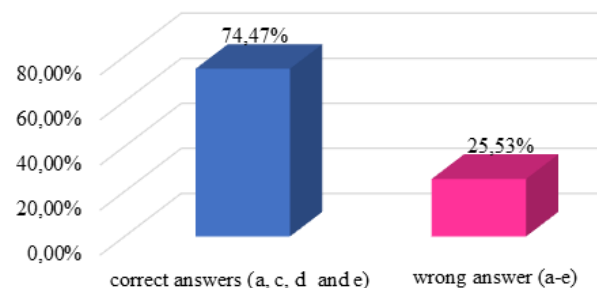
the study considered that any dental treatment should start with a thorough examination to establish the correct starting point.

Figure no. 2. Assessment of importance of the stages of dental treatment



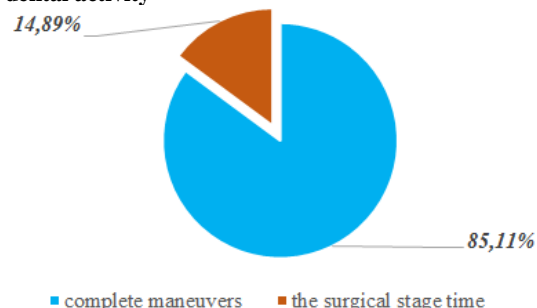
Regarding the steps that the dentist must follow in order to establish an accurate diagnosis that will lead to an appropriate treatment plan, 35 of the practitioners (representing 74.47%) answered correctly (variants a, c, d and e) and only 12 practitioners (representing 25.53%) included, in addition to the correct answers, a summary analysis of the general ailments the patient suffers from (figure no. 3).

Figure no. 3. The necessary steps to establish a correct diagnosis and the appropriate treatment plan



Concerning the main problem of organizing the dental activity, most of the subjects participating in the study (40 representing 85.11%) answered correctly, namely maneuvers performed completely during a treatment session. Only 7 subjects (representing 14.89%) answered incorrectly referring to the duration of surgery (figure no. 4).

Figure no. 4. Analysis of the problems in organizing the dental activity



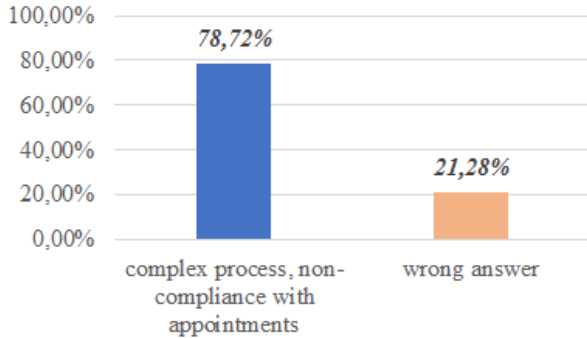
All respondents to the study considered that the activity of efficient dental care is based on a thorough planning of treatment sessions, for the proper performance of therapeutic maneuvers.

Regarding the difficulties that may arise in patient planning, most specialists (37 representing 78.72%) took into account the complex process of planning and treatment for

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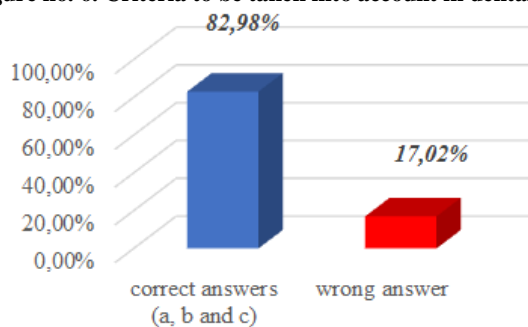
doctors working alone in the office but also the problems that arise from non-compliance with appointments (figure no. 5). A small number of specialists also wrongly considered the communication with the dental laboratory (10 representing 21.28%).

Figure no. 5. Assessing issues that may arise in patient planning



The last question related to the criteria to be taken into account in dental care, most practitioners correctly included chronic infections, pregnant women as well as patients with diseases or disabilities (39 representing 82.98%). A small number of practitioners (8 representing 17.02%) omitted chronic infections from the correct answers (figure no. 6).

Figure no. 6. Criteria to be taken into account in dental care



CONCLUSIONS

The conclusions arising from the analysis of the answers obtained by applying the questionnaire are as follows:

The examination in dentistry is the most important maneuver not only for diagnosing a dental condition, but to establish the condition diagnosis of the dento-maxillary system, in order to establish the therapeutic attitude.

The complete examination of a patient must be done in a treatment session planned for it.

Regardless the reason for which the patient presents in a dental office, the examination act acquires an overwhelming importance for it.

Planning patients at precise times, with the reservation of the time necessary to perform the indicated therapeutic acts, is the only way of working able to ensure qualitative and quantitative efficiency of dental care in urban areas.

The dentists included in the study work in several large cities in Romania, and the majority provided correct answers to the questionnaire applied (over 50%), which proves a good professional training both theoretically and practically for this category of dental specialists working in urban areas.

It is necessary to develop a methodology or a practice guide, which should include, from our point of view, the following ideas:

- a) the scheduling of the examination must be done in

- relation to the volume of requests;
- b) immediate insurance of the dental emergency;
- c) planning patients for complex and comprehensive dental care, in relation to the capacity of the dental office and based on priority criteria;
- d) planning patients to perform complete therapeutic acts in the rigorous scheduling system;
- e) follow-up of rebalanced patients, in order to maintain the balance obtained (follow-up care).

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