

Summary

Studies regarding the effects of smoking on oral-dental health

Smoking has a huge impact on the health of all hard and soft tissues of the oral cavity, the latter being the first affected by the tobacco smoke and its irritating and harmful effects.

The **aim** of this thesis was to evaluate the harmful effects of smoking on hard and soft tissues of the oral cavity; additionally we intended to implement locally, at university level, the national smoking cessation programs and to add the practical training of smoking cessation to the undergraduate curricula. Furthermore, we developed an effective local therapy for periodontal patients, both smokers and non-smokers.

The **main objective** of this thesis was to reveal the differences existing between smokers and non-smokers in their oral dental and periodontal health status as well as in their response to periodontal treatments.

Research hypothesis: There is a strong association between smoking and both poor oral dental and periodontal health, and the results of various invasive and noninvasive periodontal treatments.

In the first chapter the literature about the current knowledge in the chosen theme was reviewed.

In the first study of the thesis' original research part, the attitude of students of the Faculty of Dentistry from Tîrgu-Mureş towards smoking was evaluated during the academic years 2010-2011 and 2011-2012. Thus their smoking habits, their attitude towards the smoker patients, and their strategies in guiding the patients to smoking cessation were recorded (Chapter II). By means of this study we also contributed to the encouraging of smoking cessation on university level. The results showed that the majority of students do not smoke (59% during the first period and 65% in the second), and those who smoke cannot be considered heavy smokers: most of them smoke less than half a pack a day (31.7% in 2010-2011), or about half a pack a day (32.78% in 2011-2012). Students have tried multiple (1 - 5) times to quit smoking, but they did not feel qualified in guiding patients to quit smoking and felt their level of information in this field was lacunar.

The goal of the questionnaire was to make students realize the importance of smoking cessation and to motivate them to actively engage in anti-smoking programs, so positively influence future treatment outcomes.

In a subsequent phase (Chapter III), the oral dental health of students and of a group of patients of the same age was evaluated. So basically the students' statements from the previous chapter were verified. Each group was divided into subgroups: smokers, occasional smokers and active smokers. The results show that students have a better oral hygiene and oral dental status compared to the most appropriate control group. This means that students are aware of the harmful effects of smoking on hard and soft tissues of the oral cavity, and they compensate this with a rigorous oral hygiene. This also demonstrates that the medical education of students is yielding results.

After reviewing the status of the hard tissues both students' and patients' group have passed through the evaluation of soft tissue status which interested the gums and periodontal tissues (Chapter IV). Specific periodontal indices were determined, taking into account whether the patient is a smoker or not. Harmful effects of smoking have surfaced in this chapter as well, smokers showing higher gingival inflammation and deeper periodontal pockets than the non-smokers.

This work was concluded by the development of a periodontal treatment through a local antibiotic which was antibacterial, non-invasive, painless and easy to use (Chapter V). Periodontal tissues' status and effectiveness of treatment in stopping aggressive and chronic periodontal disease progression were followed closely. After the treatment, the periodontal index values both in smoker- and non-smoker patients have been recorded again and it has been concluded that the therapy was successful in both groups, showing significant results especially for non-smokers: in this group the depth of the periodontal pockets decreased twice compared with the smokers. It was proved once again that smoking affects the outcome of the therapy. The local therapy developed by us proved to be very stable both chemically and pharmacologically.

It is well known that oral health status of patients can improve with smoking cessation, over time reaching the level of those who never smoked. Therefore, all smokers should try quitting. We guided the majority of smoker patients who presented themselves for regular monitoring or different treatments through the path of cessation. At the present moment 2 patients had stopped smoking with the help of medication received from the "Stop Smoking" Center in Tîrgu-Mureş.

However recent results suggest that the active involvement of physicians in limiting the tobacco epidemic remains a challenge. Therefore doctors should be attracted into preventive programs and should be trained to assist public health policy measures in dentistry.

Keywords: smoking, smoking cessation, DMF-S index, aggressive and chronic periodontitis, local antibiotic-antibacterial therapy, hydrogen peroxide.