

## STUDENTS KNOWLEDGE REGARDING THE ORAL HEALTH OF THE PATIENT WITH DIABETES

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### ABSTRACT

**Introduction.** The adhesion of microorganisms and the formation of dental plaque on acrylic denture surfaces are the primary causes of several oral diseases. To form the polymer, PMMA pre polymerized fine particles are mixed with a liquid monomer resulting in chains of polymer. PMMA provisional materials are susceptible to bacterial adhesion and colonization when compared to materials used for final restorations due to the increased surface roughness

**Key words:** *complete denture, Candida albicans, microbial adhesion, etc*

### INTRODUCTION.

Diabetes is one of the most common chronic, endocrine disease. It is characterized by disorders of the entire metabolism, especially carbohydrate metabolism and by complications affecting the eyes, kidneys, nerves and blood vessels. [1].

The main symptoms of patients with diabetes are polydipsia, polyuria, nocturia, polyphagia, rapid weight loss even with a balanced diet while the most common oral manifestations in diabetes are xerostomia, burning sensation and possibly erythema, ulceration, pharyngeal infections caused by *Candida albicans*, cheilitis, lichen planus, enlargement of the salivary glands, gingival problems, periodontal problems, abscesses and marked loss of alveolar bone, although none of them is a pathognomonic lesion [2,3].

These metabolic disorders in the bodies of diabetics have important repercussions in the saliva-tooth-pulp system (Entin) which leads to impaired dynamic stability of tooth enamel, dentin,

homeostasis triggering a chain of complex processes [4,5].

### PURPOSE.

This study was conducted to assess the knowledge and awareness of oral health of diabetic patients among dental students at our institution. This study was also an attempt to raise awareness of the oral health problems and treatment needs of diabetic patients among our dental students, which will help them provide a good quality of life by ensuring oral health for them.

### MATERIAL AND METHOD.

The study was conducted in order to assess the notions and awareness among dental students of the Faculty of Dentistry Iasi. A questionnaire containing 18 questions in clinical practice was formulated. Demographic data such as age, sex and year of study were also obtained. The data collected were statistically analyzed and the results obtained. In total, 150 students were interviewed [4].

The questions in the questionnaire focused on the main changes in the oral

cavity that occur in diabetic patients as well as the influences that diabetes has on the general and local health itself.

The study was conducted to make students aware of the importance of general conditions and how through intrinsic mechanisms act on the ecosystem of the oral cavity and may interfere with local and loco regional health of the stomatognathic system.

## RESULTS AND DISCUSSION.

Following the synthesis and centralization of the results obtained, it was found that the vast majority (86.6%) of students were aware of the effect of diabetes on general health [chart1].

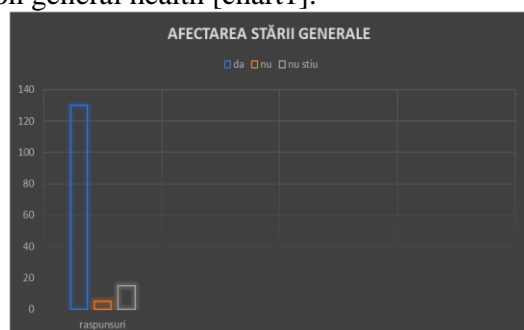


Chart 1- impairment of general health

74.6% of students were aware of the effect of diabetes on oral health [chart 2].

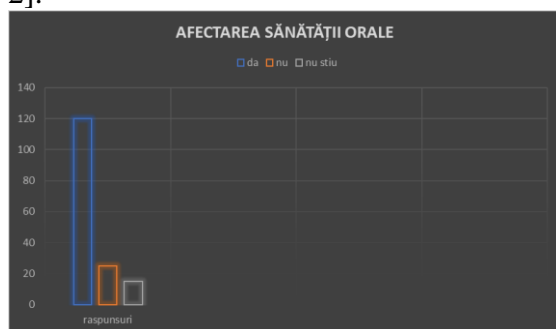


Chart 2- impairment of oral health

Following the discussions, it was concluded that 86% of students are aware that patients diagnosed with diabetes should ask for information about their glycemic values and at the same time check whether patients are still under the supervision of a diabetologist together with the family doctor before starting any medical procedure in the oral cavity.

In addition, students were informed about their attitude towards the data they need on glycemic values. Currently, blood glucose levels can be measured quickly, including in the dental office, using the Glucometer and Gluowatch devices.

In the insulin-dependent patient, we are interested in the amount of insulin administered, in daily doses, whenever he goes to a diabetologist and which was the last result of glycosylated hemoglobin.

In this way, the dentist can determine the severity of the disease, as well as how it is controlled. In addition, at each treatment session we record vital signs, and if the pulse or blood pressure is high, we will approach the patient with caution.

Dental treatments that can be performed on the patient with diabetes as follows:

1. Non-insulin-dependent patient (type II)-when diabetes is well controlled, any dental intervention can be performed without special precautions. [].

2. Insulin-dependent patient:

- when diabetes is well controlled, any dental intervention can be performed without special precautions;

- it is recommended that the patient be scheduled in the morning;

- the patient is advised to administer the dose of insulin and to eat, according to the instructions of the attending physician;

- the patient is instructed to inform his dentist that, during dental treatments, symptoms of insulin reaction may occur;

- the dentist must have at his disposal the sources of glucose, which are necessary if such reactions occur.

3. When extensive surgical treatments are required, other than a simple extraction we proceed as follows:

- we consult with the diabetic doctor regarding the diet, to be indicated after surgery.

The specialist is the one who determines the protein / carbohydrate / fat ratio, as well as the amount of insulin to be administered, in order to maintain the balance of blood glucose.

Antibiotic prophylaxis is required in patients with unstable diabetes (brittle

diabetes = defines the patient who receives significant doses of insulin and who has periods of hyper or extreme hypoglycaemia), then those who require high doses of insulin or those who have infections.

When diabetes is not well controlled (ie fasting blood glucose is 200 mg / dL) or the patient has any of the following complications: post MI (myocardial infarction), kidney damage, symptomatic angina, heart failure, old age, arrhythmias, stroke vascular, to which is added blood pressure  $\geq 180 / 110$  mm Hg, or functional capacity  $< 4$  metabolic equivalents) it is recommended to have emergency medical care.

The patient with properly controlled diabetes, with normal blood glucose levels and without serious medical complications, such as: kidney disease, hypertension or coronary atherosclerosis, can receive any kind of dental treatment.

Regarding the changes that occur in the oral cavity of the stomatognathic system, they were mentioned in the following order and the results were crystallized in graphs, containing the students' answers:

Does diabetes cause an increased incidence of tooth decay? Yes / No / Don't know (Bacterial species present in the oral cavity in patients with diabetes are similar to those found in non-diabetics. What differs are levels that increase in proportion to the severity of caries and periodontal disease

Does diabetes cause delays in healing of wounds in the oral cavity? Yes / No / I don't know

Can diabetes facilitate xerostomia? Yes / No / I don't know

Can diabetes facilitate the onset of halitosis? Yes / No / I don't know

Does diabetes facilitate the recurrence of oral ulcerative lesions? Yes / No / I don't know

Periodontal disease is the main manifestation of diabetes in the oral cavity? Yes / No / I don't know.  Do you know how to diagnose the diabetic patient? (And here it was detailed procedure by which the

diabetic patient returns to regular check-ups, planned at 3-6 months, when self-care, gingival bleeding and depth of periodontal pockets are evaluated.

there are any changes that require a specialist consultation, whether it is a dietitian, psychiatrist or other specialties. Yes / No / I don't know

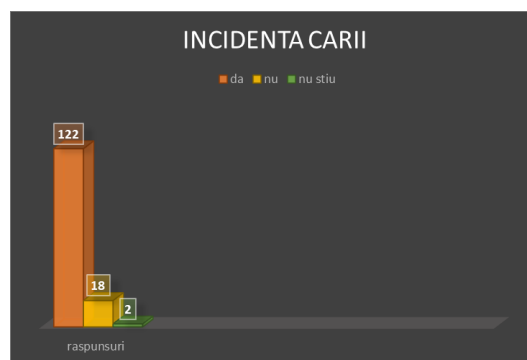


Chart 3- decays incidence

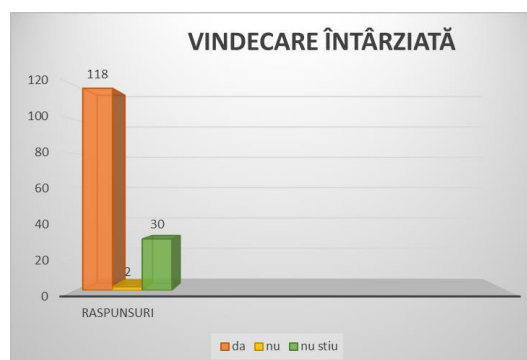


Chart 4- delayed healing

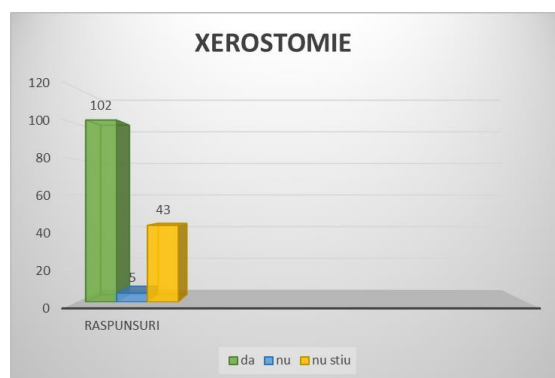


Chart 5- xerostomia

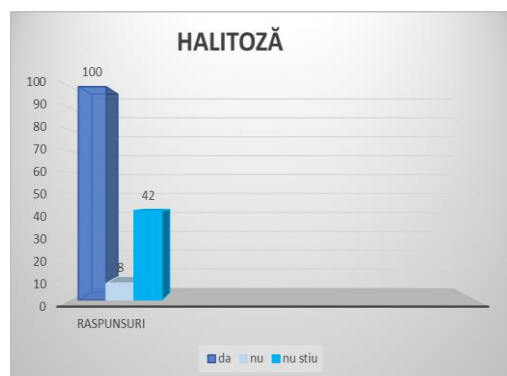


Chart 6- halitosis



Chart 7- recurrence of oral lesions

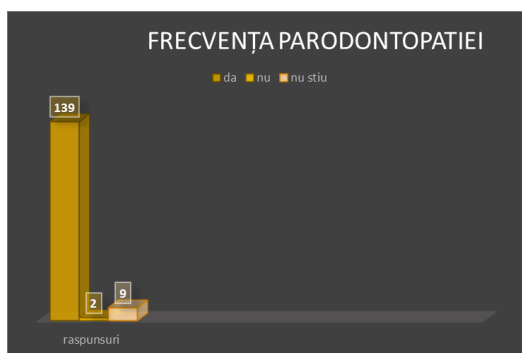


Chart 8-frequency of periodontal disease

## CONCLUSIONS

It is extremely important for dental professionals to improve the awareness of diabetic patients about the increased risk of developing oral diseases and the impact of oral health on general health.

Early detection and treatment of dental caries, periodontal disease and other oral diseases would be of enormous benefit in protecting diabetic patients from the harmful oral complications associated with diabetes.

Researchers in several studies [1,5,11-13] evaluated the awareness and attitude of diabetic patients and ordinary people, while in this study, we evaluated the awareness of dental students, because dental students are the first to be able to diagnose and disseminate the notion of oral health awareness to the public and patients. In our study, most dental students were aware of and aware of the impact of diabetes on the oral health of diabetic patients.

The results are similar to the findings of Wilder et al., [10] in which most dental schools were confident in their students' knowledge of the relationship between oral disease and systemic disorders. On the contrary, a study of Jordanian doctors found that they had limited knowledge of the association between diabetes and oral health.

Dentists, doctors and other healthcare providers should recommend a diabetic patient to see a dentist regularly. Dentists also have the opportunity and responsibility to educate diabetic patients about the oral complications of diabetes and to promote appropriate oral health behaviors. Regular dental visits provide professional care opportunities in the prevention, early detection and treatment of oral diseases, which are important for diabetic patients.

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