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## **Examination of the needs of hygienizational patients of periodontological guidelines in Lublin**

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**Abstract:**

**Introduction:** The dental treatment of every patient, who comes to the dental office, should start with his hygienization. The basis of treatment should be daily, careful oral hygiene at home. Clinical observations suggest that patients neglect or perform this incorrectly.

**Purpose of work:** The aim of the study was to assess the oral hygiene condition of patients reporting to the periodontics clinic

**Materials and Methods:** The medical documentation of 52 patients who came to the Clinic of Periodontology at the Clinical Center of the Medical University in Lublin in 2015-2016 was analyzed. There were 24 men and 28 women between 19 and 75 years of age. Extraoral and intraoral examination were performed and general medical history was taken. The CPITN index was used to assess the presence of dental deposits and tartar.

**Results:** In the group of respondents; 47 patients [90.38%] required professional hygienization.

**Conclusions:** Although almost all patients declare meticulous removal of dental deposits at least twice a day, more than 90% have shown numerous abnormalities in brushing or irregular oral hygiene. Patients do not have the skills or neglect to maintain oral hygiene, while being convinced about compliance with the hygiene regime. The doctor's role is to create conditions for education and patient motivation.

**Introduction:**

The basic stage of dental treatment for a patient applying to a dental office should be a hygiene assessment and professional hygienization if necessary. It is only after professional cleaning of the tooth surface that the full intraoral examination can be properly performed and the procedures planned as part of the rehabilitation of the patient's stomatognathic system are performed. Statistically, the majority of patients who apply to the dental office report only when their pain is worse [1]. This is a consequence of fear, lack of knowledge and motivation, as well as neglecting regular dental check-ups and hygienization procedures.

Therefore, we should strive to develop the habit of regularly applying for dental check-ups and performing professional hygienization to prevent periodontal tissue diseases and maintain oral health [2]. Dentists should put emphasis on educating and motivating a patient with the technique of proper brushing, including the appropriate frequency of brushes, the type of brush and the use of additional instruments such as dental floss, toothpicks, irrigators or interdental brushes. The acquired skills should be used by the patient in daily home hygienic treatments. The choice of a toothbrush is a contentious issue. Doctors remain divided on this point. Hand or electric brushes research seems to outweigh the advantage of the latter, indicating lower values of the presence of dental plaque in everyday use [3]. Proper oral hygiene is mainly maintained by removing dental biofilm. Despite the few publications questioning the plausibility of plaque cariogenesis, it is now widely recognized as the main cause of caries and gingivitis, and as a consequence of disease progression to periodontitis.

The current state of affairs persists, despite an increasing access to preventive measures, growing dental awareness and access to dental services, especially in high and middle-developed countries [4].

**Materials and methods:**

Medical documentation of 52 patients who came to the Periodontological Clinic of the Medical University of Lublin was analysed. There were 24 men and 28 women between 19 and 75 years of age. Extraoral and intraoral examination and general medical history were performed. The Community periodontal index of treatment needs (CPITN) index was used to assess the periodontal status, the presence of coating and tartar. The largest group were patients aged 45-59 (34.62%), who constituted more than one third. Patients in the range below 29 years and from 30 to 44 years were 26.92%. The least numerous group were people over 60 - 15.38%.

**Results:**

Patients after examination were assigned to the appropriate CPITN index code (Community periodontal index of treatment needs). It was introduced by the WHO primarily for epidemiological purposes. It allows a patient to have the stage of periodontal disease and to have conclusions about the necessary treatment drawn. Code 0 - normal state, code 1 bleeding during probing, code 2 presence of subgingival and supragingival calculus, code 3 presence of shallow pockets, up to 5mm, code 4 presence of deep pockets, from 6mm.

The number of 47 patients [90.38%] indicated the need for professional hygienization. They were subjected to periodontal examination and treatment.

It was shown that the majority of patients (62.96%) were assigned to code 2. This means the presence of supragingival and subgingival calculus, bleeding during probing, the presence of factors predisposing to plate retention and the presence of gingival pockets up to 3 mm deep. Code 3 was assigned in 22.22% of studied population, which indicates the presence of gingival pockets with a depth of more than 5 mm. The remaining results in the study group showed a level of approx. 5%. Detailed results are presented in Fig. 1.

Patients with a CPITN score of 2 require professional hygienization in a dental office, including removing tartar, curettage and / or subgingival scaling, often anti-inflammatory medications and conducting oral hygiene instruction, in order to improve the effectiveness and maintain the effects of hygienic procedures by home prophylaxis. The patient with the CPITN 3 and 4 index values requires, apart from supragingival and subgingival scaling, full periodontal diagnostic, radiological diagnostics and, additionally, may require surgical treatment and specialist consultations.

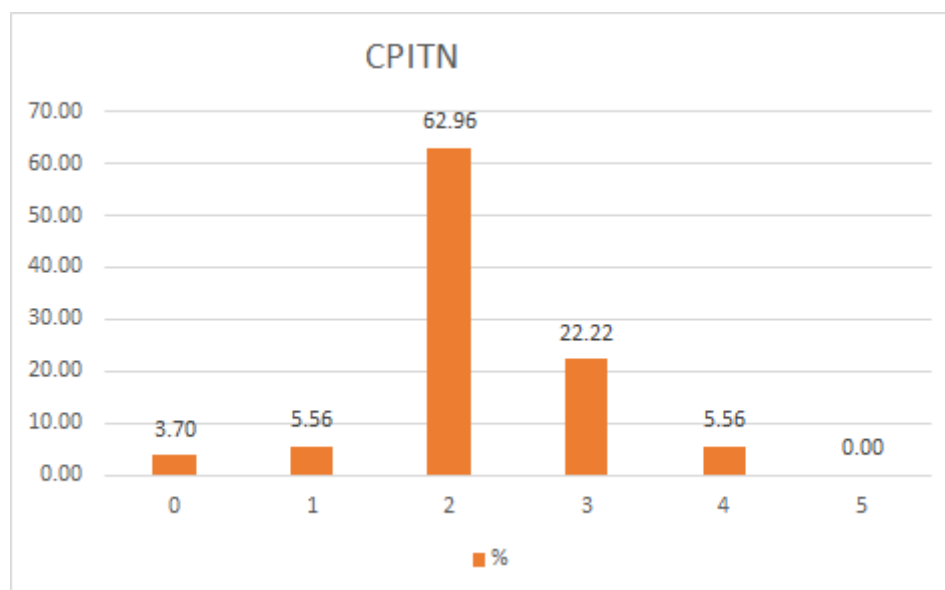


Fig. 1. Interest distribution of patients with the value of CPITN

### Discussion:

One of the factors hindering and sometimes preventing the patient from working with the dentist is fear of visiting the dentist. It has been shown that almost 80% of adults feel discomfort before a visit to the office, 20% are afraid of dental treatment and 5% avoid dental treatment completely. It places dentophobia (fear of the dentist) on the most widespread podium, next to acrophobia (anxiety of heights) and arachnophobia [fear of spiders] [5]. This adversely affects the doctor-patient relationship and, consequently, the deteriorates the oral cavity of the patient. People with dental anxiety have an average worse oral hygiene than other patients [6], what in turn leads to worse dental health and periodontitis, and also affects the occurrence of systemic diseases. Such patients visit a dentist only when the pain begins to be unbearable, and they often require uncomfortable, complicated procedures, such as endodontic treatment, incision of tooth abscess or tooth extraction. This creates a vicious circle [1]. An effective way to control the level of patient's dental fear is the use of anxiolytic drugs as part of premedication. An example of those drugs is midazolam [7].

Through the currently used prophylaxis, tools and skills, a doctor tries to provide a patient with the greatest possible comfort in a stressful situation. The use of ultrasound scanners shortens the time of treatment, allowing for shorter tartar removal time compared to using manual tools. Effectively reduces subgingival microflora due to the effect of cavitation. The ultrasound scaler effectively reduces not only the bacterial plaque in the periodontal pockets, removing the subgingival plaque and tartar, but also completely eliminates infected cement. In addition, the device can easily access subgingival areas and furcations. Ultrasonic scaler is a safe and comfortable device, if it is correctly used on a healthy tooth surface, with correct tip position, lateral pressure and power level [2].

Knowledge about the essence of oral hygiene should be instilled in the first years of life, through school education and adaptation visits in the dental office. Poor oral health has a negative impact on psychological and sociological relations in children, leading to a feeling of discomfort from an early age [8]. Literature notes that school-aged children are the target population for establishing a good oral hygiene habit. The study shows that an intensive oral hygiene education program for students aged 10-11 for one semester had a positive long-term effect on their dental knowledge, oral hygiene habits, plaque quantity, periodontal status and the number of teeth affected by carious disease [9]. Another study conducted in Poland, the largest group were children, in whom the development of correct preventive habits was introduced from the first year of life, which resulted in a decrease in the number of carious lesions [9]. This draws attention to the need to start adaptation visits in the dental office from an early age. The lack of proper education of Polish patients is proved by the study of 11 European countries, where daily brushing ranged from 68% to 98%. In turn, the daily use of dental floss concerned only 30% of respondents in Norway, and in other countries it was <10%. The lowest result of 0-1% was recorded, among others, in Poland [9].

As part of promoting dental hygiene, attention should also be paid to the elderly, in whom the prevalence of periodontal disease is high. Studies show that factors that determine risk include education, income level, gender, social support and depression, chronic and neurodegenerative diseases impeding access to dental care. The authors of the study observed that the level of oral hygiene in older people seems to be lower than in other age groups. However, it does not seem that the hygiene level is a key factor here, as the risk of oral disease development seems to be elevated due to exposure to a greater number of risk factors, such as exposed roots and weaker teeth maintenance [10]. In the study of Polish seniors, 21.7% did not visit the dental office throughout the year, and the main reason for the visit was pain [48.8%]. As many as 19.2% of respondents did not use a toothbrush or did not change it throughout the year [11]. Due to physical weakness and frequent dementia, elderly people need help in oral hygiene and regular contact with the dentist [12].

One of the reasons for abandoning check-ups may be the barrier associated with the dental care system. This results in lower quality materials and a limited range of dental services provided by the state healthcare system and high prices in the private dental sector. Low economic status and fear of pain are the reasons for postponing the visit, which increases the health problem, and specialized procedures involve even greater discomfort and pain, as well as higher costs of treatment. It makes this barrier even more difficult to overcome [13]. In conclusion, attention should be paid to the following barriers that may delay appointments at the dentist and / or avoid dentists for several years, inability to pay for services due to low

financial status, refusal to accept poor quality services, fear of pain, lack of confidence in the dentist and low health awareness [13].

### **Conclusions:**

Although all patients declare the removal of plaque at least twice a day, over 90% have shown abnormalities in brushing or irregular oral hygiene. Patients do not have the skills or neglect to maintain oral hygiene. Unaware of their own incompetence they often show no desire to improve it. The doctor's role is to create conditions for patient's education and motivation.

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