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关于牙科干预前口腔消毒治疗重要性的问题现状
（基于对专科医生的调查结果）

STATE OF THE QUESTION ABOUT THE IMPORTANCE OF ANTISEPTIC TREATMENT OF THE ORAL CAVITY BEFORE DENTAL INTERVENTION (BASED ON THE RESULTS OF A SURVEY OF SPECIALIZED DOCTORS)

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注释。本研究的目的是根据对不同专业牙医问卷材料的统计分析结果，确定局部防腐剂在牙科实践中的使用相关性，并确定其在手术预约中使用的特点。

对象和方法。通过对牙医的匿名问卷调查收集了牙科口腔防腐治疗的数据。问卷包括 19 个问题，涉及使用的防腐剂、使用频率、牙科预约期间对临床方案的遵守情况以及影响选择合适防腐剂的因素。对获得的数据进行了统计处理。

结果。问卷调查显示，91.89% 的受访者指出需要在干预前对手术区域进行初步防腐处理。葡萄糖酸氯己定 (100%)、过氧化氢 (45.45%)、呋喃西林 (33.33%) 和聚维酮碘 (21.21%) 是外科牙医最常用的防腐剂。选择的因素包括微生物负荷的减少程度、抗菌作用的持续时间、无不良反应以及关于防腐剂在临床实践中有效性的研究数据。

94.59% 和 85.14% 的问卷参与者分别知道所用防腐剂的不良反应和禁忌症清单，54.05% 的人在实践中注意到对防腐剂的不良/负面反应。

结论。所得结果表明微生物净化问题与现代牙科实践的相关性，这表明需要有针对性地制定个性化的防腐术前准备方案，同时考虑到患者的个人特征和口腔微生物群。

关键词：防腐；预防；安全；功效；方案；问卷。

Annotation. The aim *of the study is to determine the relevance of the use of local antiseptic agents in dental practice, as well as to identify the peculiarities of their use at surgical appointments based on the results of statistical analysis of questionnaire materials of dentists of various specialties.*

Objects and methods. *Data on oral antiseptic treatment in dentistry were collected by anonymous questionnaire survey of dentists. The questionnaire included 19 questions about the antiseptic agents used, frequency of their use, adherence to clinical protocols during dental appointments, and factors influencing the choice of appropriate antiseptic agents. The obtained data were subjected to statistical processing.*

Results. *The questionnaire survey showed that 91.89% of the respondents noted the need for preliminary antiseptic treatment of the surgical area before intervention. Chlorhexidine bigluconate (100%), hydrogen peroxide (45.45%), furacilin (33.33%) and povidoyiodine (21.21%) are the most frequently used antiseptic agents by surgical dentists. The factor of choice is the degree of reduction of microbial load, the duration of antimicrobial effect, the absence of adverse reactions, and the data of studies on the effectiveness of antiseptics in clinical practice.*

The list of adverse reactions and contraindications of antiseptic agents used was known to 94.59% and 85.14% of the questionnaire participants, respectively, with 54.05% noting adverse/negative reactions to antiseptic agents in their practice.

Conclusion. *The obtained results indicate the relevance of microbial decontamination issues for modern dental practice, which indicates the need for targeted development of personalized protocols for antiseptic preoperative preparation of patients taking into account their individual characteristics and oral microbiome.*

Keywords: *antisepsis; prophylaxis; safety; efficacy; protocol; questionnaire.*

Introduction. Invasive interventions in the oral cavity have a cardinal difference from operations in other localizations due to the impossibility of creating sterile conditions in the operative field. The oral cavity is a unique ecological niche inhabited by various species of bacteria, fungi and viruses freely circulating in the oral fluid [1]. As a consequence, surgical manipulations are accompanied by disruption of the integrity of sterile tissues, which creates a high risk of microbial contamination of the latter and the development of not only local infectious and inflammatory complications, but also systemic lesions with transient bacteremia in immunocompromised individuals [2, 3]. Preoperative and postoperative instillation of the area of intervention using antiseptic agents can minimize the risk of postoperative inflammatory complications, as well as the risk of iatrogenic infection of medical personnel.

The aim of the study is to determine the relevance of the use of local antiseptic agents in dental practice, as well as to identify the peculiarities of their use at surgical appointments based on the results of statistical analysis of questionnaire materials of dentists of various specialties.

Objects and methods. The work was carried out on the basis of the Universal Declaration on Bioethics and Human Rights (1997), the Council of Europe Convention on Human Rights and Biomedicine (1997) and the World Medical Association Helsinki Declaration on the Ethics of Scientific and Medical Research as amended in 2000-2008. Informed consent for the use of the results of the survey was obtained from each participant of the study, certified by personal signature. The authors took all possible measures not to disclose the personal data of the study participants.

Data on antiseptic treatment of the oral cavity in dentistry was collected by questionnaire survey of dentists. A total of 74 dentists participated in the questionnaire. The questionnaire included 19 questions about the antiseptic agents used, the frequency of their use, compliance with clinical protocols during dental appointments, and factors influencing the choice of appropriate antiseptic agents.

The list of antiseptic agents for local use in dentistry, presented for selection during the questionnaire survey, was determined taking into account the indefinite period of registration according to the "Center for Expertise and Testing in Public Health", availability for sale in pharmacies of the Republic of Belarus, as well as recommendations in accordance with the clinical protocols approved by the Resolution of the Ministry of Health of the Republic of Belarus N 66 of May 2, 2023.

Thus, the following list of antiseptic agents was determined: Chlorhexidine bigluconate; Povidone iodine; Miramistin; Furacilin; Potassium permanganate; Hydrogen peroxide; Mucosanin; Furagin (Furasol®); Cetylpyridinium chloride; Dequaline chloride (Efisol®); Septolete Total®; Oroseptin®; Cameton M®, in addition, the possibility to choose "Other" was given, pre-specifying the drug used, not represented in the proposed list. Statistical method was used to analyze the obtained data: Microsoft Excel 2013, Past4.16 software.

Results of the study. Out of the total number of specialist doctors interviewed, 41.89% belonged to the therapeutic profile, 36.49% to the surgical profile, 6.76% to the orthopedic profile, 14.87% were pediatric dentists (6.76% therapeutic and 8.11% surgical).

Distribution by gender – 59.46% of respondents were women, 40.54% – men. The average age of the sample was 34.51±1.51 years, working experience was 11.5±1.44 years, professional development courses were completed within a period of not more than 4 years, while for 60.81% of respondents the period of completion was not more than 12 months at the time of the survey.

The study participants represent public and private health care organizations (71.62% and 6.76%, respectively), and 21.62% of respondents combined their work activities.

According to the results of the questionnaire 91.89% of respondents noted the need for preliminary antiseptic treatment of the surgical area before the interven-

tion. Surgical dentists most frequently used chlorhexidine bigluconate (100%), hydrogen peroxide (45.45%), furacilin (33.33%), and povidoyiodine (21.21%) (Figure 1).

For the dental surgeon, the factor of choice is the degree of reduction of the microbial load and the duration of the antimicrobial effect, as well as the absence of adverse reactions. For the therapeutic dentists, when selecting an antiseptic agent, the importance of the results of studies on the effectiveness of the latter in clinical practice (in the form of courses, lectures, webinars, scientific articles and other publicly available sources) is noted.

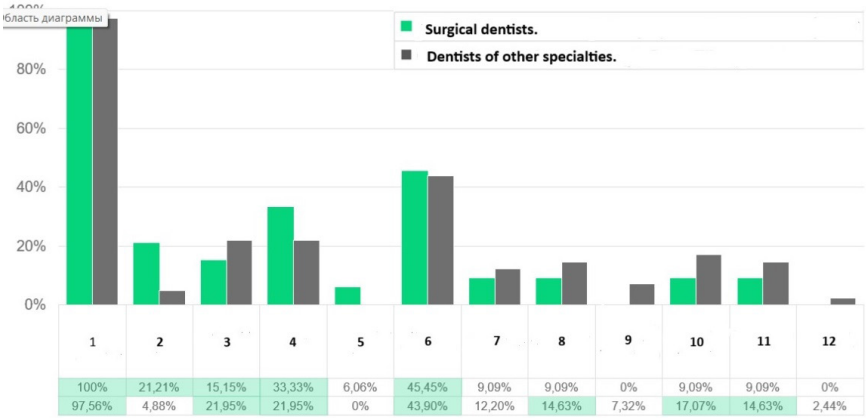

Figure 1. *Results of answering the questionnaire: "What antiseptic agents do you use in your practice?", where 1 – Chlorhexidine bigluconate; 2 – Povidone iodine; 3 – Miramistin; 4 – Furacilin; 5 – Potassium permanganate; 6 – Hydrogen peroxide; 7 – Mucosanin; 8 – Furagin (Furasol®); 9 – Dequaline chloride (Efisol®); 10 – Septolete Total®; 11 – Oroseptin®; 12 – Another option.*

The list of adverse reactions and contraindications of antiseptic agents used is known by 94.59% and 85.14% of the survey participants, respectively, with 54.05% noting adverse/negative reactions to antiseptic agents in their practice. According to the results of the questionnaire, the following changes were noted: chlorhexidine bigluconate – allergic reactions, tooth discoloration, dysbacteriosis; povidone iodine – allergic reactions, tooth discoloration; hydrogen peroxide - burning in the area of application, burn of the oral mucosa; oroseptin – burning in the area of application.

Given the sample size and the difficulty of taking into account the questionnaire, it is not possible to statistically identify a reliable frequency of adverse reactions when using certain antiseptics in this study. The use of a narrow range

of antiseptics is associated with a higher frequency of allergic reactions (r=0.54, p<0.001).

Chlorhexidine bigluconate (100%), Miramistin (36.36%), SeptoleteTotal (45.45%) are the most commonly recommended antiseptic agents for home use by both surgical and general practitioners (Figure 2).

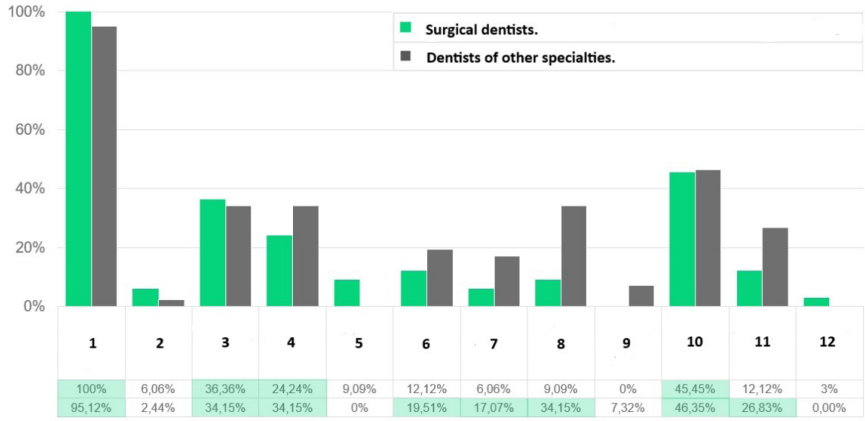

Figure 2. *Results of the survey question: "Which antiseptics do you recommend to patients for home use?", where 1 – Chlorhexidine bigluconate; 2 – Povidone iodine; 3 – Miramistin; 4 – Furacilin; 5 – Potassium permanganate; 6 – Hydrogen peroxide; 7 – Mucosanin; 8 – Furagin (Furasol®); 9 – Dequaline chloride (Efisol®); 10 – Septolete Total®; 11 – Oroseptin®; 12 – Another option.*

In individual use, the choice of drug is influenced by the convenience of its use (dosage form), as well as the cost and availability for purchase. It was observed that dentists with more experience recommend a wider range of products (r=0.34, p<0.005). Dentists who have recently completed advanced training courses are more likely to recommend home use of antiseptic agents to their patients (r=0.30, p<0.05).

Conclusion. The obtained results testify to the relevance of microbial decontamination issues for modern dental practice, which indicates the need for targeted development of personalized protocols of antiseptic preoperative preparation of patients taking into account their individual characteristics and oral microbiome.

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