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BIOCOMPATIBILITY OF MATERIALS IN RESTORATIVE DENTISTRY

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Abstract: This article analyzes how the optimization of dental care in practice is not only the development of new technologies and methods of care, but also the improvement of organizational approaches, the introduction of modern materials, and ensuring the quality of care. At the same time, the search for simple and effective methods of using filling materials, which can significantly reduce the working time of the doctor and the patient, and at the same time ensure the high quality of tooth restoration, teaching them to students, and the actual problem of modern dentistry is studied. [2, p. 20]. In the teaching of preclinical restorative stomatology, odontotherapy, various teaching methods aimed at effectively understanding and achieving the goals of the didactic process are recommended.

Key words. Preclinical, phantoms, "Bulk fill", cariesb biomimetic, occlusion.

Theoretical, practical and clinical examination is a research method in which the patient's condition is observed and studied, anamnesis is taken, examination and physical examination are carried out; Laboratory examination - includes the examination of blood, urine, feces and other biological materials to determine the level of various indicators and the presence or absence of pathological processes in the body; Instrumental research - includes various methods based on the use of medical devices and equipment.

For example, X-ray, ultrasound, electrocardiography computer tomography, etc.; Functional studies - measurement, electroencephalography, electromyography, etc. The effectiveness of providing dental care to the population in Uzbekistan is one of the priorities of modern medicine. It is necessary to take into account lectures, seminars, hours of practical work and hours for independent work on this subject. Pre-clinical restorative stomatology courses from the first semester are in accordance with the purpose and the following forms of training can be used during practical work: frontal activity, individual, brainstorming, group discussions, practical work on phantoms, practical research. "Preclinical restorative stomatology" is an integral component of the professional formation of a dentist.

The education of students is carried out by transitioning to the clinical stage of dentistry, introducing them to the specific features of the structure of the dental room, the organization of dental equipment and dental care, and the concept of ergonomics. Practical work on phantoms is necessary for the transition of students to the stage of clinical training. formation of practical skills in training a qualified dentist and allows for improvement. Theoretical study of dental instruments and their practical application in phantoms, and as well as the principles of classical and modern preparation of caries cavities in patients with caries forms practical skills necessary for treatment. According to the study of filling materials and the principles of ergonomics of this knowledge practical application, preclinical training of a student on conservative odontotherapy completes and prepares him to work with the patient. Filling material is used by dentists to restore tooth structure after removing caries or other damage. It is necessary to remove plaque, fill cavities caused by caries, enamel defects or trauma.

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The goal is to restore the functionality and aesthetics of the tooth, prevent the further development of caries and protect against possible infection. The knowledge gained in the field of sterilization of dental instruments, as well as the concepts of asepsis and antiseptics in the dental office are an important stage in the formation of future dentists.

1. The use of the latest developments in the field of improvement of filling materials of the mass filling group greatly simplifies the laborious process of layering composites, which shortens the time of the dental appointment. As a result, the level of patients' confidence in the doctor and, at the same time, the professional image of the clinic as a whole increases.

2. A new generation in the work of dental clinics of all forms of ownership the introduction of materials leads to an increase in economic efficiency, as it allows more patients to provide dental care per unit of time.

3. Simple and effective tooth restoration technique "mass filling" is of high quality guarantees dental services and thereby significantly increases the efficiency of the dental clinic.

4. To appropriate biomimetic restoration protocols when performing biomimetic restoration compliance is very important. To achieve the desired treatment results, it is recommended to increase the intervention area by 5-8 times.

5. From the protocols of stress minimization and viscosity maximization In addition, there are other principles related to the implementation of biomimetic restoration. A qualified doctor must understand all aspects of minimally invasive intervention, the analysis of tooth components and the dynamics of the polymerization process.

6. The goal of using biomimetic restoration protocols is restorations is to increase durability and reduce the number of necessary repeated interventions. In addition, it prevents periodontal complications and irreversible damage to the pulp, which can preserve the residual structure of the tooth as much as possible. The use of biomimetic treatment protocols is very beneficial for both patients and doctors.

The purpose of "Preclinical restorative stomatology" science is to apply theoretical knowledge in the clinical activity of a doctor-dentist and to form unique practical skills. Classical and modern methods of caries treatment are used in the training of students, and at the same time, the student receives sufficient and necessary theoretical knowledge for the transition to clinical activity. Textbooks on the specialty available in the university library, methodological recommendations of the department staff, tables, diagrams, information resources in electronic format, national and foreign websites, etc. are used as didactic support. Students receive individual assignments for group presentation and discussion, and can be assessed on the quality of independent work and practical skills.

The following study methods are recommended for students:

• mastering theoretical material after lecture and textbook - observation-phantoms while working on it, the student must observe the correct position in relation to the phantom;

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• analysis - use of dental instruments, as well as aseptic and antiseptic methods;

• comparison - comparison of classic materials and modern methods of preparing caries spaces in different situations;

• algorithm development - methods and filling for prepared spaces selection of materials;

• modeling - necessary elements to recreate the situations in the phantom identify and choose, form conclusions, make a final decision based on one's point of view.

Dental diseases are one of the pathologies of social importance, and the population's demand for dental care is one of the most common cases. An important solution to the problem of high-quality sanitation of the oral cavity is to restore the patient's teeth with the help of modern filling materials. However, the restoration of missing tooth tissue is a complex technological process, which must be performed sequentially, strictly following the filling method in several stages [3, p. 111]. At the same time, both the doctor and the patient spend a lot of time and effort in this process. The rapid development of modern restoration technologies has led to the emergence of a new generation of filling materials in the dental market that allow to achieve the best results in the shortest possible time. Manufacturers of dental materials offer to solve the problem of high-quality restoration of teeth with the help of composites of the bulk filling group, i.e. included in one part, for example, "SDR" (Dentsply), "Filtek bulk filling" (3M YeSPE). The main characteristics of the materials of the "bulk fill" group:

• a new principle of gap filling by reducing polymerization stress (up to 60%), which allows the application of the material in layers up to 4 mm to the enamel-dentin border with subsequent restoration of enamel

• high physico-chemical properties (compressive strength and resistance), career gap

provides volumetric recovery;

• compatibility of the material with any adhesive system and composite material based on methyl methacrylate resins; during restoration in the "mass filling" technique, the doctor does not have to abandon the usual adhesive system and the previously selected traditional composition; fluid consistency and "self-aligning property" - surface smoothing. after application in composite-large parts, especially on the border with hard tissues of the tooth allows you to get rid of the problem of controlling the uniformity of the material when used in cut areas; thixotropy, which does not allow the material to flow out of the cavity when applied in large quantities. parts, for example, in the area of the chewing teeth of the upper jaw;

• high contrast ratio exceeds most composite materials, which significantly facilitates the diagnosis;

• shades with a minimum amount of pigment, which is fast to a depth of 4 mm leads to polymerization.

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