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NEW STAGES AND MODIFICATIONS OF TOOTH EXTRACTION

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Annotation: The medical system of our republic has found its place in a market economy, and at the same time, it is necessary to radically change the provision of high-quality emergency medical care to the population, restore health, and expand the scope of medical care. sanitary and preventive work, studying existing best practices abroad and solving implementation issues.

Keywords: Modification, tooth extraction, problem,complex tooth.

Currently, the complex of rehabilitation work includes orthopedic methods aimed at the complete correction of pathological changes and functional structures of the dental system, as well as issues of preventive importance. Materials science of dental technology as an independent branch of general materials science is closely related to the technology of dental prosthetics. They are usually studied simultaneously, which ensures a connection between theory and practice. In orthopedic dentistry, in the treatment of pathological conditions of the maxillofacial system, a large number of devices, mouth guards and dentures, differing in their types and designs, are used. The optimal recognition problem is solved as a search for the minimum average risk. To minimize the number of incorrectly classified samples, we obtain a pointwise estimation algorithm based on the condition of maximum membership probability. Probabilities are calculated by recurrent forward and backward procedures. If the risk of obtaining incorrect curve segmentation is minimized, then we obtain an optimal segmentation algorithm using a dynamic programming scheme. In this case, a modification of the algorithm is constructed that operates in real time with a "floating" delay, the value of which is determined and changed by the algorithm. A heuristic modification of the algorithms is proposed that can significantly increase performance without noticeably reducing the quality of segmentation. In the feature space we define non-overlapping areas of accurate classification. When a curve segment falls into the area of a given class, a deterministic decision is made on its classification, after which segments that are not assigned to any class with a length greater than the minimum length of the standard are processed by probabilistic methods. These areas are subject to conditions of non-intersection and simplicity of boundary description.

The processes occurring in the dentoalveolar segment during tooth extraction surgery were studied using mathematical and physical modeling methods. At the first stage of tooth extraction, in order to reliably insert the elevator, it is necessary to apply some force to the tool handle. To simulate the process, the problem of a compressed column enclosed in an elastic pipe and the contact problem are considered. It was found that the pressure on the bone with a force of -6 kg, measured experimentally, and an area of the cutting edge of the instrument of 0.02 cm will be 300 kg/cm. When inserted, the elevator moves the tooth in the opposite direction, which is accompanied by partial rupture of periodontal fibers, and the tooth also moves upward with rupture of periodontal fibers in the area of the apex of the tooth root. The walls of the alveoli are subject to compression, the depth and width of which depend on the mechanical properties of the instrument and the condition of the tissues of the jaw bones. In this case, the periodontal fibers are simultaneously broken in the area of the working part and a layer of the alveolar bone wall is removed. The pressure on the alveolar bone tissue on the side of the elevator insertion and on the opposite side of the socket is analyzed. At the second stage, a load acting perpendicular to the tool handle is added to the translational and rotational movements of

the elevator. The doctor begins to work with the elevator as a lever with the fulcrum on the edge of the hole in the area where the elevator is inserted.

The tooth extraction procedure is a surgical procedure aimed at removing a tooth from its socket if it is not possible to solve the problem using another method. Since extraction involves surgery, it is necessary to seriously prepare for the procedure. This will allow you to undergo all manipulations without problems and reduce the likelihood of complications. At the preparatory stage, it is necessary to take an x-ray to determine the size and shape of the roots, as well as to identify the presence of inflammation. If inflammation is detected, preliminary treatment is prescribed and only after it is stopped, extraction is carried out. 1 or 2 hours before surgery, it is recommended to premedicate with sedatives that enhance the effect of local anesthesia.

The operation to remove a tooth can be simple or complex (accompanied by an incision in the gum), and its duration can vary from several minutes to an hour. In addition, tooth extraction in children and adults, as well as in people with any diseases, may have some features and nuances. On average, the operation takes about 30-40 minutes and includes the following steps:

Anamnesis collection. The first stage, during which the doctor finds out whether the patient has any diseases, as well as allergic reactions to medications - this makes it possible to select the optimal anesthesia option in this case.

Anesthesia. The dentist administers an anesthetic drug to the patient, and in standard cases, carpules are used for this purpose. Their duration of action can range from 40 minutes to several hours.

Preparation. Using a special tool, the gum is peeled away from the tooth - this approach avoids injury to soft tissue during the removal process.

Tooth swinging. At this stage, the doctor applies forceps to that part of the tooth that is located above the bone tissue, and, tightly squeezing the handles of the instrument, begins to loosen it. This requires some physical effort and is necessary in order to destroy the ligaments with which the tooth is attached to the bone.

Tooth extraction. As a result of the previous stage, the tooth becomes mobile and can be removed from the socket. After this, the hole must be inspected and all bone fragments removed from it. Hole processing. If the operation was carried out against the background of purulent inflammation, then the hole must first be washed with an antiseptic, and then an anti-inflammatory drug should be placed in it. In addition, to quickly heal the gums and prevent complications, sutures are sometimes placed on it.

After removal, the patient must follow all doctor's recommendations and take prescribed medications. If within 24 hours after the operation the hole begins to bother you greatly, you should definitely consult a doctor, since any discomfort may be a symptom of a complication called alveolitis.

Complex tooth extraction:

Complex tooth extraction is carried out when, for some reason, it is not possible to remove it from the gums using ordinary forceps. For example, if the tooth has not fully erupted, has curved roots, is severely damaged, or is located below the gum level. In such cases, the dentist has to trim the gum to detach it from the bone.

Removing an impacted tooth is considered one of the most difficult dental operations. It involves the extraction of a tooth that has partially erupted only one third of the way above the gum, or has not erupted at all and continues to grow in the wrong direction under the periosteum. In this case, the procedure is performed with enhanced anesthesia, since the operation is painful and can take about 1.5 hours. Removal of a wisdom tooth begins with an incision in the mucous membrane in the operated area, after which the visible part of the dental tissue is cut down and the tooth is divided into fragments, which are then removed. The freed hole is cleaned, treated with an antiseptic and then sutured.

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