

Efficacy and safety of anesthesia on the lower jaw

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Aim improving the efficiency and safety of conduction methods of local anesthesia on the lower jaw for outpatient dental procedures.



Fig. 1. The place of injection of the needle during the blockade of the mandibular nerve by J. Gow-Gates.



Fig. 2. The place of injection of the needle during the blockade of the mandibular nerve by P.M. Egorov.

Materials and methods

we examined 92 patients, aged 21-50 years, without concomitant somatic diseases who underwent surgical intervention in the lower jaw (removal of impacted and dystopic teeth K01.0, removal of teeth with chronic apical periodontitis K04.6, periodontal abscess K05.2). To determine the effectiveness of the conductor methods of anesthesia, we used a clinical assessment of the pain of interventions proposed in the Moscow state medical and dental University. A. I. Evdokimov. Heart rate, systolic and diastolic blood pressure were recorded. In 45 patients (48.9%), conductive anesthesia on the mandible was used according to P. M. Egorov (fig.2), in 47 patients – 51.1%) the method of j was used. J. Gow-Gates (fig.1). In 26% of cases anesthesia was performed in the presence of inflammation. The effectiveness of anesthesia was evaluated by analyzing the anesthesia zone, the time of anesthesia onset (latent period) and its duration. An anesthetic based on articaine with adrenaline concentration of 1: 100000 and 1:200000 was used. Recorded complications: the presence of hematoma positive aspiration samples posleinektsionnye pain, muscle lockjaw. In the method of PM Egorov solution fills the pterygoid-jaw space, diffusing from the lower pole to the upper, and in the method of J. Gow-Gates - from the upper pole to the lower. The results were statistically processed using standard Microsoft Office 2000 programs on a personal computer.

Research result. The results of the first clinical signs of anesthesia in the form of paresthesia in the anterior third of the tongue 2,7 min(method of P. M. Egorov) and 3,9 min (J.Gow-Gates) and the corresponding half of the lower lip 2,9 min(method of P. M. Egorov) and 4,4 min (J.Gow-Gates). In conditions of inflammation of the tissues, effective anesthesia in 89% of cases was performed by P. M. Egorov. During anesthesia according to the method of J. Gow-Gates the efficacy corresponded to 96%. The number of complications, hematomas, positive aspiration tests, post-injection pain was 1.9%. Several more (2.2%) local complications were observed during anesthesia according to P. M. Egorov. During surgery removal of impacted and dystopic teeth using the method of J. Gow-Gates, 2.6 times less likely to carry out additional pain relief than applying the method of P. M. Egorova. In addition, with anesthesia according to P. M. Egorov, insufficient anesthesia of the mucous membrane from the lingual side was revealed in 3 patients (3.2%), and the buccal side - in 14 patients (15.2%). With mandibular anesthesia by the method of J. Go-gates had insufficient anesthesia from the lingual side - in 2 patients (2.1%), and in the area of innervation of the buccal nerve - in 11 patients (11.9%). Our data confirm that the blocking of the buccal nerve is achieved in a much smaller number of cases. It is necessary to combine any method of mandibular anesthesia with blockade of the buccal nerve. Thus, clinical and physiological studies have shown that the effectiveness of conductive anesthesia in the lower jaw depends on the method of injection anesthesia, the composition of the local anesthetic drug, the type of dental intervention and the presence or absence of inflammation in the analgesic tissues.

Summary

1. The effectiveness of conductive anesthesia on the lower jaw according to P. M. Egorov, which does not require additional anesthesia in the absence of acute inflammation, is 92%. Using j's method. J. Gow-Gates the efficacy was 98%. The effectiveness of anesthesia on inflamed tissues was 89% and 96%, respectively.
2. In surgical dental interventions and treatment of inflammatory diseases in the lower jaw, a more effective and safe is a modified method of blockade of the mandibular nerve by J. Gow-Gates.

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