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#### Реферати

##### ЕФЕКТИВНІСТЬ І БЕЗПЕКА ТРИВАЛОЇ СИСТЕМОЇ ТЕРАПІЇ НЕОНАТАЛЬНОГО ГЕРПЕСУ АЦИКЛОВІРОМ У ІМУНОКОМПЕТЕНТНИХ ДІТЕЙ

Маврутенков В.В., Больбот Ю.К., Шварацька О.В., Казацька О.В.

Представлено обговорення двох клінічних випадків новонароджених чоловічої статі, народжених природним шляхом, в термін, у яких розвинулась неонатальна герпетична інфекція (вірус простого герпесу 2 типу (HSV-2)). У матерів обох пацієнтів були ознаки везикулярного висипу в аногенітальній області під час пологів. В обох випадках HSV-2 інфекція мала інтранатальний шлях передачі. Клінічний курс інфекції відрізнявся рецидивуючим везикулярним висипом без ознак лихоманки або системних розладів. Обом пацієнтам з раннього віку була призначена безперервна системна терапія ацикловіром на період більше одного року. В обох випадках переносимість тривалого курсу ацикловіру була доброю і був досягнутий тривалий контроль інфекції. Таким чином, подібний терапевтичний режим може бути кращим за переривчасті короткострокові курси при загостреннях інфекцій HSV-1 і HSV-2 у немовлят. Оцінка ефективності і оптимальної тривалості лікування повинна визначатися в основному клінічними показаннями.

**Ключові слова:** неонатальний герпес, ацикловір, діти, терапія

Стаття надійшла 15.04.18 р.

##### ЭФФЕКТИВНОСТЬ И БЕЗОПАСНОСТЬ ДЛИТЕЛЬНОЙ СИСТЕМОЙ ТЕРАПИИ НЕОНАТАЛЬНОГО ГЕРПЕСА АЦИКЛОВИРОМ У ИММУНОКОМПЕТЕНТНЫХ ДЕТЕЙ

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Рецензент Крючко Т.О.

DOI 10.26724/2079-8334-2019-1-67-73

UDC: 616.314-002 / .18-002-08: 615.211

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#### COMPARATIVE CLINICAL EFFICIENCY ASSESSMENT OF VARIOUS LOCAL ANESTHESIA METHODS IN CURING DENTAL CARIES AND PULPITIS.

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The clinical efficacy comparison of various local anesthesia methods was carried out in 109 patients with acute deep caries of teeth, 18 - with pulmonary hyperemia and acute traumatic pulpitis, and 25 - with acute and chronic pulpitis forms requiring local anesthesia for dental treatment. The total of 30 healthy individuals with a lack of carious lesions and pulpitis of similar teeth groups and the identical age group served as controls. For the efficient management of local anesthesia during the outpatient treatment of patients with acute deep caries of teeth, pulmonary hyperemia and acute traumatic pulpitis, the biological method for maintaining the viability of the pulp and its functions has proven the superiority of the intraosseous anesthetic method. In our opinion, anesthesia of dental manipulations in patients with acute and chronic pulpitis forms by extirpation method should be carried out by the infiltration, conduction and intraosseous methods of amide anesthetics administering with vasoconstrictor concentration of 1: 100000, which prevent pulp bleeding during treatment.

**Key words:** teeth caries, pulpitis, local anesthesia.

*The study is a fragment of the research project "Features of the course, therapeutic and diagnostic tactics and prevention of hard tooth tissues diseases, periodontal and mucous membrane of the oral cavity under the influence of local and general factors", state registration number 0113U006438 (2013-2018).*

The most common among dental diseases is dental caries and its complications, which according to WHO affect about 90% of the population. Especially sharply caries grew among the population in the last century, which can be associated with living conditions and work, as well as with the nature of the diet. Acute deep caries and pulmonary disease are accompanied by different nature and intensity of pain.

The problem of pain and anesthesia of painful manipulations in dental caries and pulpitis treatment, remains relevant despite the large number of studies [3, 5]. This is due to the fact that modern dentistry

presents a large number of analgesia means and methods used in dental manipulations, but there are no clear recommendations for their use. Taking into account the peculiarity of blood supply and innervations of the maxillofacial area, pain in patients with dental interventions is significantly expressed and accompanied by psychoemotional discomfort, which forms a negative attitude towards dental manipulation in a patient. Increased anxiety and fear of stomatological interventions can lead to changes in the general state of the body, therefore, it is necessary to create the appropriate comfort for the patient [1, 2, 4, 8]. The main method of analgesia in the process of performing dental interventions is local anesthesia, which is the safest and the most effective way to control pain sensations.

Today there are no clear indications as to the choice of the local anesthesia methods in treatment of caries and its complications. Also, the search for a local anesthetic that does not affect the body as a whole, but would only act locally, continues.

Local anesthesia is characterized by the following criteria: speed of onset, depth, duration, maximum efficiency. Local anesthetics in the anesthetizing zone undergo rapid vascular distribution, therefore it is advisable to determine the most effective method and compare different methods of local anesthesia when treating dental caries and various forms of pulpitis [11].

Consequently, given the lack of clarity in a number of aspects concerning various local anesthesia methods application in the treatment of dental caries and various forms of pulpitis, we were forced to compare the results of the local anesthetic methods application and optimize their choice.

**The purpose** of the study was to compare the clinical efficacy of various local anesthesia methods in treatment of dental caries and various forms of pulpitis.

**Materials and methods.** We examined 152 patients with acute deep caries of teeth and various forms of pulpitis and the absence of general-somatic pathology and 30 controls of the same age group and similar groups of intact teeth. The distribution of patients was as follows: 109 - with acute deep caries of teeth, 18 - with hyperemia of pulp and acute traumatic pulpitis, which were treated using the biological method, 25 - with acute and chronic forms of pulpitis, which were treated by the extirpation method.

In order to compare the efficacy of the infiltration, conduction, and intraosseous anesthesia methods in dental manipulations, the division of each patients group into 3 equal ones was performed (figure 1).

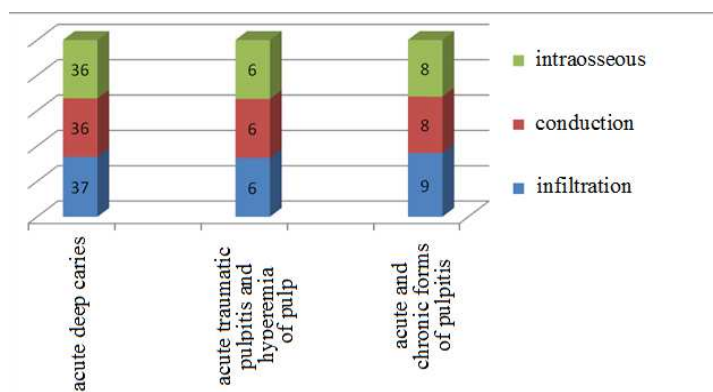


Fig. 1 Distribution of patients by groups according to the method of anesthesia.

Patients with acute deep caries of teeth were divided into groups as follows: 37 patients underwent the infiltration, 36 - conductive, 36 - intraosseous anesthesia to treat the acute deep caries of teeth. Patients with pulmonary hyperemia and acute traumatic pulpitis were divided into 3 equal groups of 6 people in each of these anesthesia methods. Patients with acute and chronic forms of pulpitis were treated with the extirpation method: 9 - with the infiltration, 8 - conduction, 8 - intraosseous anesthesia.

The scale suggested by the American Association of Anesthetists (ASA) was used to assess the degree of dental risk in patients. This scale is based on the subjective distribution of patients into 5 subgroups, taking into account the planned intervention volume and the general condition of patients. In 100% of patients, the degree of anesthetic risk was assessed as Class I, that is, practically healthy patients.

Taking into account the results of our previous studies [7], in the treatment of patients with acute deep caries, pulmonary hyperemia and acute traumatic pulpitis, local anesthesia was performed using a local anesthetic Septanest 1: 200000, in acute and chronic forms of pulpitis - Septodest 1: 100,000 produced by Septodont (France).

In order to evaluate the efficacy of local anesthesia, the "Scale of clinical efficacy" (Sokhov S.T.) [12] was applied: 1 point - dental manipulations are absolutely painless, anesthesia - effective; 2 points - in the course of stomatological intervention, the patient experienced a slight pain, which required additional anesthesia, this anesthetic was considered not sufficiently effective; 3 points - a significantly painful manipulation, requiring repeated local anesthesia and was considered ineffective.

The assessment of the local anesthesia main efficacy parameters was based on determining the threshold of pain sensitivity of the tooth pulp using the method of electroodontodiagnosis (EOD) by means

of IBN-01 apparatus in accordance with the generally accepted procedure [9]. The EOD was performed prior to the local anesthetic administration and after 2, 5, 10, 15, 20, 30, 45, 60 minutes after administration. After obtaining the mean values of these indices, the effect / time curve was created, which indicated the depth of anesthesia (maximal increase in rates), time of the pulpal anesthesia onset (in seconds) and the end time of pulpal analgesia (in minutes). Duration (in minutes) of working anesthesia is the difference between the onset of pulpal analgesia and its end. The criterion for pulpal analgesia was the index of 100  $\mu$ A.

To determine the most effective method of administering a local anesthetic, a comparative assessment of 3 local anesthesia methods: infiltration, conduction and intraosseous ones was performed. The infiltration and conduction anesthesia was performed according to generally accepted procedures [13]. The intraosseous anesthesia was performed using the QuickSleeper apparatus in accordance with the generally accepted procedure [6, 10].

**Results of the study and their discussion.** In order to compare the efficacy of the infiltration, conduction and intraosseous local anesthesia of dental manipulations in patients, they were assessed according to the recommendation of Sokhov S.T. (table 1).

Table 1

**Efficacy comparison of the infiltration, conduction and intraosseous local anesthesia methods by Sokhov S.T. in treating caries**

Efficacy of anesthesia	Patients with acute deep caries		
	Infiltration n=37	Conduction n=36	Intraosseous n=36
complete	33/89.2%	34/94.4%	100%
partial	3/8.1%	2/5.6%	-
insufficient	1/2.7%	-	-

Taking into account the data, the efficacy of anesthesia is high with all types of anesthesia when treating patients with acute deep caries of teeth. Thus, in 89.2% of patients using the infiltration method of anesthesia, there was a complete absence of pain. In isolated cases, partial was found: in 3 patients (8.1%) and in the one patient (2.7%) insufficiency of the pulp analgesia with the infiltration anesthesia method was observed. During the conduction anesthesia, the quality of analgesia was significantly better: 94.4% of patients reported the complete, 5.6% - partial analgesia. In the case of the intraosseous anesthesia, complete absence of pain sensation was observed in 100% of patients during the acute deep caries treatment. That is why the best method of local anesthesia was intraosseous anesthesia. The results are presented in table 1.

When comparing the efficacy of the above-mentioned methods of anesthesia during dental manipulations with pulp hyperemia and acute traumatic pulpitis, similar, but somewhat lower, results were obtained. In the infiltration anesthetizing, complete pulp analgesia was observed in 66.8% of patients, with the conduction method it made 83.3%. The total of 16.7% of patients experienced insignificant pain after the conduction anesthesia, and 16.6% required additional injection after the infiltration anesthesia. In the case of the intraosseous anesthesia, 100% of the patients reported complete painless interferences, so it was considered to be the most effective. The results are presented in table 2.

Table 2

**Efficacy comparison of the infiltration, conduction and intraosseous local anesthesia methods by Sokhov S.T. in treating pulp hyperemia, acute traumatic and chronic forms of pulpitis**

Efficacy of anesthesia	Patients with pulp hyperemia and acute traumatic pulpitis (biological method of treatment)		
	Infiltration n=6	Conduction n=6	Intraosseous n=6
complete	4/66.8%	5/83.3%	100%
partial	1/16.6%	1/16.7%	-
insufficient	1/16.6%	-	-
Efficacy of anesthesia	Patients with acute and chronic forms of pulpitis (extirpation method of treatment)		
	Infiltration n=9	Conduction n=8	Intraosseous n=8
complete	7/77.7%	6/75%	7/87.5%
partial	-	1/12.5%	1/12.5%
insufficient	2/22.3	1/12.5%	-

In the treatment of acute and chronic forms of pulpitis by extirpation method using the infiltration way of anesthesia, 2 (22.3%) patients and 1 (12.5%) patient - with the conduction anesthesia complained of severe painful manipulation and required additional analgesia. With the intraosseous anesthesia, only 1

(12.5%) patient experienced slight pain in the interventions, indicating the superiority of the intraosseous anesthesia compared to the infiltration and conduction methods. The results are presented in table 2.

The efficacy of anesthesia is also assessed by the onset time. The mean values are given in table 4. Analyzing the results, the attention was drawn to the fact that the time of the intraosseous anesthesia onset is 2 times shorter than that of the infiltration, and 3 times that of the conductive method with a high degree of the values difference reliability ( $p < 0.001$ ) in all study groups.

Thus, the fastest onset of analgesia with the intraosseous anesthesia can be assessed as the best result in comparison with the infiltration and the conduction local anesthesia.

The analgesia efficacy is also assessed by the duration of anesthesia. In studying the duration of anesthesia (table 5), it was found that in local anesthesia manipulations in the treatment of patients with acute deep caries of teeth, the final analgesia was disturbing patients for about 49 minutes after the infiltration and for 54 minutes after the conduction anesthesia. Also, the final analgesia was observed in patients for an average of 50 minutes with the infiltration and 55 minutes with the conduction anesthesia in the treatment of pulmonary hyperemia and acute traumatic pulpitis. The duration of the intraosseous anesthesia was equal to its working time, therefore, it received a more favorable assessment, in contrast to the above-mentioned methods.

Table 3

**The onset of analgesia with the infiltration, conduction and intraosseous anesthesia (in seconds)**

Patients	Infiltration anesthesia	Conduction anesthesia	Intraosseous anesthesia
acute deep caries of teeth (n=109)	147.61 ± 4.74	207.5 ± 7.98	72.13 ± 2.69
p <sub>1</sub>	-	< 0.001	-
p <sub>2</sub>	-	-	< 0.001
p <sub>3</sub>	-	< 0.001	-
pulp hyperemia and acute traumatic pulpitis (n=18)	155.66 ± 1.61	244.83 ± 1.78	83.16 ± 1.16
p <sub>1</sub>	-	< 0.001	-
p <sub>2</sub>	-	-	< 0.001
p <sub>3</sub>	-	< 0.001	-
acute and chronic pulpitis (n=25)	132.88 ± 2.23	203.25 ± 4.12	70.37 ± 0.83
p <sub>1</sub>	-	< 0.001	-
p <sub>2</sub>	-	-	< 0.001
p <sub>3</sub>	-	< 0.001	-

Notes: (henceforward) 1. p<sub>1</sub> - values difference between the infiltration and the conductive anesthesia; 2. p<sub>2</sub> - values difference between the infiltration and the intraosseous anesthesia; 3. p<sub>3</sub> - values difference between the conduction and the intraosseous anesthesia.

The greatest duration of anesthesia was observed in patients when treating acute and chronic forms of pulpitis. The duration of anesthesia exceeded the same in patients treated for acute deep caries of teeth by 10% after the infiltration anesthesia, and by 8% in patients treated for pulp hyperemia and acute traumatic pulpitis, respectively, by 16.2% and by 19.1% after performing the conduction anesthesia, by 8.6% and by 10.3% - after the intraosseous anesthesia. Taking into account these data, we believe that this is due to a higher concentration of vasoconstrictor (1: 100000) in the anesthetic drug.

Table 4

**Results of the anesthesia duration study with different methods of analgesia (in minutes)**

Patients	Infiltration anesthesia	Conduction anesthesia	Intraosseous anesthesia
acute deep caries of teeth (n=109)	51.72 ± 1.54	57.52 ± 3.51	20.83 ± 0.54
p <sub>1</sub>	-	> 0.05	-
p <sub>2</sub>	-	-	< 0.001
p <sub>3</sub>	-	< 0.001	-
pulp hyperemia and acute traumatic pulpitis (n=18)	52.83 ± 1.08	59.16 ± 0.64	25.33 ± 0.54
p <sub>1</sub>	-	< 0.001	-
p <sub>2</sub>	-	-	< 0.001
p <sub>3</sub>	-	< 0.001	-
acute and chronic pulpitis (n=25)	57.44 ± 1.04	70.62 ± 1.06	44.12 ± 0.88
p <sub>1</sub>	-	< 0.001	-
p <sub>2</sub>	-	-	< 0.001
p <sub>3</sub>	-	< 0.001	-

Comparing the indices of the mentioned criterion, it was found that with the use of the intraosseous anesthesia, the duration of analgesia more than 2 times was shorter than with the infiltration and the conduction anesthesia, that is why the final phenomena discomfort was less expressed.

The efficacy analysis of the anesthesia methods in the treatment of caries of teeth and various forms of pulpitis in the order of the anesthesia efficacy reducing is as follows: the intraosseous, conduction, infiltration methods. In addition, the advantage of the intraosseous anesthesia is also demonstrated by an increase in the rate of efficacy by 5.6% compared to the conduction and 10.8% - to the infiltration methods during the treatment of patients with acute deep caries of teeth, in the treatment of patients with pulp hyperemia and acute traumatic pulpitis by the biological method by 16.7% and 33.2%, during treatment of patients with acute and chronic forms of pulpitis by the extirpation method by 12.5% and 9.8% respectively.

In the treatment of caries and pulpitis, the anesthetic efficacy of intraosseous anesthesia has an advantage over the infiltration and the conduction methods. This is evidenced by a significantly shorter time of the anesthesia onset and its duration, which contributes to avoiding the effects of ischemia during the treatment of dental caries and various forms of pulpitis, with the preservation of the tooth pulp's life and the absence of the soft facial tissues numbness that is observed during the infiltration and the conduction anesthesia. However, taking into account the tooth pulp ischemia, which has a positive effect on the treatment of extirpation in patients with acute and chronic pulpitis, all the above methods can be recommended for use.

If it is necessary to preserve the pulp during the treatment of dental caries and with inflammation of the pulp, the working time of the pulp analgesia is very important, it is determined by the threshold of pain sensitivity - electroodontodiagnosis (EOD). Figures 2 and 3 show the ratio of the anesthesia duration and the threshold of the pulp pain sensitivity during the treatment of patients with acute deep caries, pulp hyperemia and acute traumatic pulpitis using the biological method.

Assessing the "effect-time" curves in the treatment of patients with acute deep caries (fig. 2) ambiguous changes in EOD indices are presented for the infiltration, conduction, and intraosseous anesthesia.

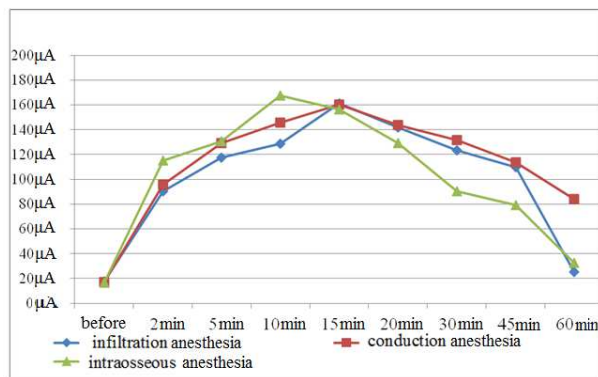


Fig. 2. The "effect-time" curves in the treatment of patients with acute deep caries of teeth

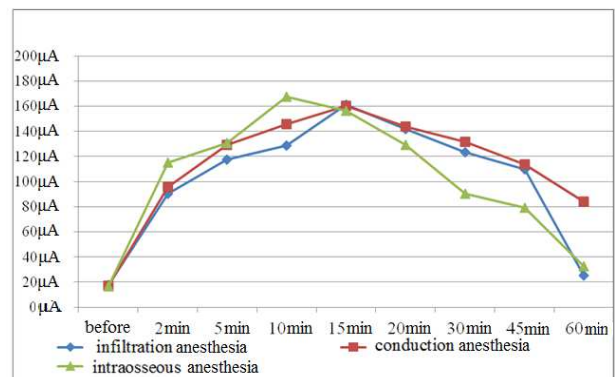


Fig. 3. The "effect-time" curves in the treatment of patients with pulp hyperemia and acute traumatic pulpitis.

The pulp analgesia with the intraosseous anesthesia onsets in 2 minutes, the maximum threshold of pain sensitivity at the 10th minute is  $168.27 \pm 2.12 \mu\text{A}$ . The working time of anesthesia lasted about 20-25 min, the given time is enough for painful manipulations in treatment of patients with acute deep caries of teeth. In this case, patients did not report discomfort (numbness of lips, cheeks, tongue). With the infiltration and the conduction anesthesia (Septanest 1: 200000): the onset of analgesia was at the 5th minute; and the maximum threshold of pain sensitivity was  $155.41 \pm 7.73$  and  $163.68 \pm 2.51 \mu\text{A}$  - at the 15th minute; the duration of anesthesia was about 45 minutes.

Taking into account the influence of local anesthetic, and especially the effect of vasoconstrictor on the state of blood flow to the tooth pulp, it can be concluded that prolonged anesthesia will not contribute to the very rapid recovery of microhemodynamics in the pulp, and therefore to prevention of the ischemic tissues necrosis. Also, it should be noted that within 60 minutes after the infiltration and the intraosseous anesthesia, the EOD rates were approaching the baseline level. In performing the conduction anesthesia, on the contrary, the rates were 3 times higher, which was assessed as an adverse effect of this method.

During treatment of patients with pulp hyperemia and acute traumatic pulpitis in the analysis of anesthetic efficacy (fig. 3), a similar dynamics of EOD indices was observed after the infiltration, conduction and intraosseous anesthesia. The best results were obtained in the implementation of the intraosseous method. The mean duration of the infiltration anesthesia during dental manipulations was equal to that of the conduction anesthesia. Patients in these groups reported discomfort (numbness of the lips, tongue, cheeks, mucous membranes).

Thus, when comparing the results of the study, the advantage of the intraosseous anesthesia was found in the treatment of patients with acute deep caries of teeth, pulp hyperemia and acute traumatic pulpitis with the biological method. This was evidenced by the provision of rapid anesthesia and the depth of anesthesia, the lack of the oral mucosa numbness, as well as of the risk of the ischemic pulp necrosis. In this respect our results are consistent with the data obtained by other researchers [3, 5, 7]

However, given that the ischemia of the pulp has a positive effect during the extirpation method of treatment, the use of infiltration, conductive methods of local anesthesia is possible, but the advantage should be given to the intraosseous method. It also complies with the opinion of other experts who had studied this issue [10].

Therefore, in view of the need to increase the efficacy of anesthetic care for treatment of patients with different forms of caries and its complications, based on our study, we have suggested an optimal choice of means and methods for local anesthesia that should be used on the outpatient basis, depending on the type of pathological process and the treatment method selected.

### Conclusion

For effective local anesthesia during the outpatient treatment of patients with acute deep caries of teeth, pulp hyperemia and acute traumatic pulpitis by the biological method with the purpose of preserving the pulp's life and its functions has proven the superiority of the intraosseous anesthetic method.

In our opinion, anesthesia of dental manipulations during the treatment of patients with acute and chronic forms of pulpitis by the extirpation method should be carried out by the infiltration, conduction and intraosseous methods of administering amide anesthetics containing catecholamines 1: 100000, which allow to prevent pulp bleeding during treatment.

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### Реферати

#### ПОРІВНЯЛЬНА ОЦІНКА КЛІНІЧНОЇ ЕФЕКТИВНОСТІ РІЗНИХ МЕТОДІВ ЛОКАЛЬНОЇ АНЕСТЕЗІЇ У ЛІКУВАННІ КАРІЕСУ ЗУБІВ ТА ПУЛЬПИТУ

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Проведено порівняння ефективності різних методів місцевого знеболення у пацієнтів: 109 - з гострим глибоким карієсом зубів, 18 – з гіперемією пульпи і гострим

#### СРАВНИТЕЛЬНАЯ ОЦЕНКА КЛИНИЧЕСКОЙ ЭФФЕКТИВНОСТИ РАЗЛИЧНЫХ МЕТОДОВ ЛОКАЛЬНОЙ АНЕСТЕЗИИ ПРИ ЛЕЧЕНИИ КАРИЕСА ЗУБОВ И ПУЛЬПИТА

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Проведено сравнение эффективности различных методов местного обезболивания у пациентов: 109 - с острым глубоким карієсом зубів, 18 - с гіперемією пульпи і острым

травматичним пульпитом і 25 – гострими і хронічними формами пульпиту, які потребували місцевого знеболення стоматологічного лікування. 30 здорових осіб із відсутністю каріозних уражень і пульпиту аналогічних груп зубів, ідентичного вікового періоду слугували контролем. Для ефективного проведення місцевого знеболення під час амбулаторного лікування пацієнтів з гострим глибоким карієсом зубів, гіперемією пульпи і гострим травматичним пульпитом біологічним методом маючи на меті збереження життєдіяльності пульпи та її функцій доведена перевага внутрішньокісткового методу знеболення. Знеболення стоматологічних маніпуляцій під час лікування пацієнтів з гострими і хронічними формами пульпиту екстирпаційним методом на нашу думку доцільно проводити інфільтраційним, провідниковим та внутрішньокістковим методами введення амідних анестетиків з вмістом катехоламінів 1:100000, які дозволяють попередити кровоточивість пульпи при лікуванні.

**Ключові слова:** карієс зубів, пульпіт, місцеве знеболення.

Стаття надійшла 16.05.18 р.

травматическим пульпитом и 25 - острыми и хроническими формами пульпита, нуждающихся в местном обезболивании стоматологического лечения. 30 здоровых лиц с отсутствием кариозных поражений и пульпита аналогичных групп зубов, идентичного возрастного периода служили контролем. Для эффективного проведения местного обезбоживания во время амбулаторного лечения пациентов с острым глубоким кариесом зубов, гиперемией пульпы и острым травматическим пульпитом биологическим методом с целью сохранения жизнедеятельности пульпы и ее функций доказано преимущество внутрикостного метода обезбоживания. Обезболивание стоматологических манипуляций при лечении пациентов с острыми и хроническими формами пульпита экстирпационным методом по нашему мнению целесообразно проводить инфильтрационным, проводниковым и внутрикостным методами введения амидных анестетиков с содержанием катехоламинов 1:100000, которые позволяют предупредить кровоточивость пульпы при лечении.

**Ключевые слова:** кариес зубов, пульпит, местное обезбоживание.

Рецензент Шешукова О.В.

DOI 10.26724/2079-8334-2019-1-67-79

UDC 616.1:612.017+616.716.4-001:616.89

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## ADAPTIVE RESPONSES OF CARDIOVASCULAR SYSTEM AND NON-SPECIFIC RESISTANCE OF THE BODY IN CASES OF MANDIBULAR FRACTURE

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The purpose of the research was to study the peculiar features of the autonomic nervous system response to the injury by the parameters of cardiovascular system and changes in non-specific resistance of the body in cases of open traumatic mandibular fracture in patients of different psychosomatic personality types. Sixty males diagnosed with traumatic open unilateral mandibular angle fracture, as well as 36 extraverts and 24 introverts, were examined. The study of vegetative tonus has proved that among the extraverts in 44.4% of cases, the autonomic nervous system is in a state of functional balance, whereas in the introverts it only occurs in 25% of cases. It has been established that extraverts in the early post-traumatic period have better adaptabilities of the non-specific resistance system.

**Key words:** fracture, mandible, personality type, Kerdo index, Garkavi index.

*The study is a fragment of the research project "Optimization of conservative and surgical treatment of patients with defects and deformations of the tissues in the maxillofacial area", state registration No. 0110U004629.*

Recently, in the literature it has been proved that stress responses that follow the mandibular fractures have a significant effect on the course of bone wound healing and frequency of purulent complications [5, 6, 9, 10, 11]. In particular, Voloshyna L.I., Rybalov O.V. state that each third injured introvert experiences traumatic osteomyelitis, whereas the every tenth extrovert patients do [4]. It is obvious that the individual features of the organism are those factors that must be taken into account when conducting treatment and recovery procedures. Among the indicators that present the impact of injury on the body, the response of cardiovascular system and non-specific resistance of the body are important. However, no reports on their changes in cases of traumatic mandibular fractures in the patients of different psychosomatic personality types have been found in the literature. That is why it has come to be the aim of our study.

The **purpose** of the paper was to study the peculiar features of the response of autonomic nervous system to the injury by the parameters of cardiovascular system and changes in non-specific resistance of the body in cases of traumatic open mandibular fractures in the patients of different psychosomatic personality types.

**Material and methods.** Sixty male patients with traumatic unilateral open mandibular angle fractures, of the average age of 25.2±5.0 years old, were examined. The patients were divided into two groups: the extraverts (group 1, 36 people), the introverts (group 2, 24 persons). The study of vegetative tonus was carried out, which was evaluated by blood flow parameters. The pulse rate and blood pressure were determined. The Kerdo index [1, 2, 3, 8] was assessed by these blood parameters. According to the