ENDODONTIC TREATMENT OF CHRONIC APICAL PERIODONTITIS BY REPEATED FILLING

Shukurova N.T.
Samarkand State Medical University, Faculty of Dentistry. Samarkand.
Nasrullayeva S.M.
the 1-st year student

ARTICLE INFO

Qabul qilindi: 10- November 2023 yil
Ma’qullandi: 15- November 2023 yil
Nashr qilindi: 21-November 2023 yil

KEY WORDS

zinc oxide eugenol paste, resorcin-formalin paste, x-ray.

ABSTRACT

Treatment of patients with chronic periodontitis is one of the most complex and important tasks of modern dentistry. On an outpatient basis, 134 patients were examined with endodontic treatment with two of the most common types of pastes: resorcin-formalin and zinc oxide eugenol. According to the type of paste, all the examined patients were divided into two groups: 78 patients (51.5%) whose teeth were sealed with resorcin-formalin paste and 56 patients (48.5%) with zinc oxide eugenol paste. According to the study, in the group of teeth previously treated with resorcin-formalin paste, more than 2/3 were molars (77.0 + 2.2%), every fifth tooth was premolar (19.1 + 2.0%) and the least were the front teeth (3.9 + 1.0%). In the group of teeth previously treated with the use of zinc oxide eugenol paste, the ratio of types of teeth in different age subgroups differed. Almost equal fractions in frequency were noted for the front teeth (29.2 + 2.4%), premolars (29.8 + 2.4%), the proportion of molars was slightly higher (41.0 + 2.4%).

Despite the constant introduction of the latest endodontic instruments, materials and technologies, the rate of complications after endodontic treatment remains high. Patients with diseases of the periapical tissues make up from 18% to 40% of the total number of people seeking dental care [1,2,3,4].

Chronic apical periodontitis can serve as a source of development of odontogenic inflammatory processes in the maxillofacial region and neck, complicate the course of diseases of internal organs and systems, lead to tooth extraction, bite deformation and a decrease in chewing efficiency, thereby causing physical and moral inconvenience to the patient [5,6, 7,]. The sources of progressive periapical foci of chronic infection in 14.8% of cases are teeth with unfilled root canals and in 76.4% - teeth with partially filled canals [8].

An X-ray examination of teeth after previous endodontic treatment using resorcinol-formalin and zinc oxide eugenol pastes revealed periapical destructive changes in 80% of

cases and poorly filled root canals in 50% of cases [9]. The cheapest and most widespread filling materials for root canals in the vast majority of dental medical organizations (73.4%) are zinc oxide eugenol and resorcinol-formalin pastes [10].

Purpose of the study.

Increasing the effectiveness of repeated endodontic treatment of chronic apical periodontitis using the method of delayed root canal filling.

Materials and methods.

We conducted a study of randomly selected 134 medical records of dental patients aged 18 to 70 years from a dental appointment in a city municipal clinic for the period from 2008 to 2013. According to the type of paste, all examined patients were divided into two groups: 78 patients (51.5%), whose teeth were filled with resorcinol-formalin paste and 56 patients (48.5%) - with zinc oxide eugenol paste. At this stage, repeated endodontic treatment was performed on 57 patients (64 teeth): 32 women and 25 men aged from 18 to 70 years, due to poor-quality endodontic treatment due to chronic pulpitis and/or chronic pulpitis in the acute stage. A comprehensive examination of patients consisted of clinical and radiological methods. Clinical examination included inspection, palpation, percussion, probing. Targeted intraoral radiographs of the examined teeth were taken to determine the density and level of root canal filling, the degree of their patency, the condition of the periapical tissues (widening of the periodontal fissure, the nature of periapical changes) and the bone tissue of the interdental septa.

Using a random sampling method, patients were divided into two groups: control and main. In turn, each group was divided into two subgroups according to the type of filling material in the root canals: zinc oxide eugenol paste and resorcinol-formalin paste.

Table 1.

Distribution of patients in the control and main groups.

Type of paste	RFP		ZEP		Total	
Patient groups	Абс	% + т	Абс	% + т	Абс	%±т
Control	13	54,2 ± 6,4	16	45,8 ±6,4	31	45,0 ±4,3
Main	27	54,2 + 6,0	18	45,8 ± 6,0	43	55,0 ± 4,3
Total	40	54,2 ± 4,4	34	45,8 ±4,4	74	100

Note: in this and subsequent tables

RFP - resorcinol - formalin paste, ZEP - zinc oxide eugenol paste,

Abs. - absolute value.

Results.

It was found that in the group of teeth previously treated using resorcinol-formalin paste, more than 2/3 were molars (77.0 + 2.2%), every fifth tooth was a premolar (19.1 + 2.0%) and less in total there were anterior teeth (3.9 + 1.0%). In this group of different age

subgroups of patients, we noted that at the ages of 35 - 44 years, 45 - 54 years and 55 - 64 years, all types of teeth are most fully represented: incisors, canines, premolars and molars. In the subgroup of patients 35-44 years old, the number of molars dominated - 80.5 + 3.7%, premolars were 4 times less - 18.6 + 3.7%, and anterior teeth - 0.9 + 0.9%.

A similar trend persisted in the age subgroup of 45-54 years: it was also dominated by molars - 75.9 + 4.0%, significantly less premolars - 22.4 + 3.9%, and anterior teeth - 1.7 + 1, 2%. In the age subgroup of 55-64 years, there were 59.3 + 5.5% molars, 25.9 + 4.9% premolars, and 14.8 + 3.9% anterior teeth. In the oldest age subgroup of 65 years and older and the subgroup of patients aged 25–34 years, the species composition of teeth was represented by premolars and molars. In the 25-34 year old subgroup there were 95.3 + 3.2% molars and significantly fewer premolars - 4.7 + 3.2%.

In patients 65 years of age and older, there were 71.4 + 17.1% molars, and 2.5 times less premolars - 28.6 + 17.1% of teeth. In the youngest age subgroup of patients 18-24 years old, all identified teeth were molars. The largest number of teeth in total was in patients of the age subgroups 45 - 54 years (30.7 ± 2.4%) and 35 - 44 years (29.9 + 2.4%).

In the group of teeth previously treated with zinc oxide eugenol paste, the ratio of tooth types in different age subgroups differed. Almost equal shares in frequency were noted for anterior teeth (29.2 + 2.4%), premolars (29.8 + 2.4%), the proportion of molars was slightly higher (41.0 + 2.4%). In this group of patients, in almost all age subgroups, except for the oldest subgroup, all types of teeth were identified. In the youngest age subgroup of patients 18-24 years old, molars predominated - 58.9 + 6.6%, premolars were two times less - 26.8 + 5.9%, anterior teeth were 14.3 + 4.7%. In the age subgroup of 25-34 years, the proportions of premolars and anterior teeth were almost the same: 34.5 + 5.2% and 35.7 + 5.2%, there were slightly fewer molars - 29.8 + 5.0%.

In the subgroups of patients 35-44 years old and 45-54 years old, the proportions of anterior teeth and premolars were the same: 27.5 + 4.1% and 31.3 + 6.9%, respectively. In the subgroup of 55-64 years old there were almost half of the front teeth - 44.8 + 9.2%, and the same number of premolars and molars: 27.6 + 8.3% of teeth each. In the oldest age subgroup of 65 years and older, there were 66.7 + 27.2% of molars, and half as many premolars - 33.3 + 27.2%. The largest number of patients treated endodontically using zinc oxide eugenol paste was aged 35-44 years (33.7 + 2.5%), slightly less in the age subgroup 25-34 years (23.6 + 2.3%).

Thus, as a result of a retrospective analysis, we came to the conclusion that two types of pastes were most widely used for filling root canals: resorcinol-formalin (51.5%) and zinc oxide eugenol (48.5%). We noted that the species composition of teeth previously filled with resorcinol-formalin paste consistently expanded with increasing age of patients. Moreover, in each age subgroup, the number of treated molars dominated over other types of teeth. And in the group of teeth previously filled with zinc oxide eugenol paste, the species composition of the teeth was widely represented in all age subgroups.

Conclusions.

Repeated endodontic treatment in compliance with modern requirements for mechanical, medicinal treatment and filling of root canals promotes the restoration of bone tissue in the area of destructive periapical lesions, regardless of the type of paste, while the favorable prognosis is significantly higher in teeth previously filled with poor quality zinc oxide

eugenol paste (17.3%), than resorcinol-formalin (12.5%). A retrospective analysis found that endodontic treatment of teeth diagnosed with chronic pulpitis or chronic pulpitis in the acute stage was more often carried out using resorcinol-formalin paste in patients aged 45-54 years (30.7 + 2.4%), using zinc oxide eugenol paste - 35-44 years old (33.7 + 2.5%), which indicates a socially active part of the population.

The dynamics of restoration of periapical lesions was 2-2.5 times higher in teeth (especially previously treated with zinc oxide eugenol paste), during retreatment of which the method of delayed root canal filling was used (in teeth with resorcinol-formalin paste - 31.9%, in teeth with zincoxide eugenol paste - 36.4%), compared with conventional endodontic treatment (for teeth with resorcinol-formalin paste - 12.5%, for teeth with zincoxide eugenol paste - 17.3%), which is reliably confirmed by the dynamics of the increase in average index values PAI according to A. M. Solovyova.

Literature:

1.Шукурова Н. Т., Муратова С. К., Тураев А. Б. Врачебная тактика при диагностике туберкулеза полости рта //Вестник науки и образования. – 2020. – №. 18-2 (96). – С. 86-91.

2.Muratova S., Khaydarov A., Shukurova N. The peculiarities of endothelial dysfunction indicators in patients with chronic brain ischemia //International journal of pharmaceutical research. – 2020. – Т. 12. – №. 2. – С. 1725-1728.

3.Муратова С. К. и др. CELLULAR COMPOSITION STATE AND MICROFLORA OF ORAL MUCOSAL EPITHELIUM OF PATIENTS WITH CHRONIC CEREBRAL ISCHEMIA //УЗБЕКСКИЙ МЕДИЦИНСКИЙ ЖУРНАЛ. – 2021. – Т. 2. – №. 3.

4.Mikhaylovich K. A. et al. CELLULAR COMPOSITION STATE AND MICROFLORA OF ORAL MUCOSAL EPITHELIUM OF PATIENTS WITH CHRONIC CEREBRAL ISCHEMIA. – 2021.

5.Fakhriddinovna A. N. et al. Platelet condition in children with congenital cleft palate in chronic foci of infection //Достижения науки и образования. – 2019. – №. 12 (53). – С. 113-115.

6.Kadirovna M. S. Modern Ideas About the Pathogenesis of Generalized Periodontitis //Eurasian Medical Research Periodical. – 2023. – Т. 19. – С. 42-45.

7.Kadirovna M. S., Tillayevna S. N. Assessment of the Dental Condition of Patients with Impaired Cerebral Circulation //Eurasian Medical Research Periodical. – 2023. – Т. 19. – С. 38-41.

8.Kadirovna M. S. et al. Results of Complex Treatment of Chronic Disseminated Periodontitis in Patients Who Have Undergone Covid-19 //Eurasian Medical Research Periodical. – 2023. – Т. 20. – С. 27-29.

9.Kadirovna M. S. et al. Endodontic Treatment of Chronic Apical Periodontitis with The Drug Hydroxy calcium by Delayed Filling //Eurasian Medical Research Periodical. – 2023. – Т. 20. – С. 34-37.

10.Kadirovna M. S., Tillayevna S. N. A Literary Review of Statistical Indicators in the Diagnosis of Oral Tuberculosis //Eurasian Medical Research Periodical. – 2023. – Т. 20. – С. 30-33.

11.Kadirovna M. S., Otabek o’g’li T. S. Improvements Prediction of The Severity of the Clinical Course of Parhodonites in Patients with Hypertension //Eurasian Medical Research Periodical. – 2023. – Т. 20. – С. 15-19.