



mucosa of the oral cavity and hyposalivation resulting in increased dental deposits, increased general fibrinolytic activity of the oral fluid, and intensified gingival bleeding.

The aim of the study is to investigate the physical-chemical properties of the oral fluid in patients suffering from type 2 diabetes mellitus requiring surgical sanitization of the oral cavity. We examined 41 patients afflicted with type 2 diabetes mellitus aged from 38 to 69. The control group included 25 somatically healthy individuals of the same age. To determine the secretory activity of the large and small salivary glands, the oral fluid was taken in the morning on empty stomach for 5 minutes without stimulation, and 5 minutes after stimulation before doing medical indications and manipulations. To stimulate excretion of the oral fluid the oral cavity was rinsed with 20 ml of 0,5% citric acid solution for 5 seconds. Salivation rate (ml/min), specific gravity (kg/m^3), pH (relative units), and viscosity (cP) were examined.

Salivation rate of non-stimulated oral fluid at the beginning of surgical sanitization of the oral cavity reduced in 2,1 times and was $0,31 \pm 0,01$ ml/min, and stimulated one – in 1,8 times ($0,48 \pm 0,02$ ml/min) compared to the indices of the control group ($0,66 \pm 0,02$ ml/min in non-stimulated fluid and $0,84 \pm 0,04$ ml/min after its stimulation). At the same time, the specific gravity of non-stimulated and stimulated oral fluid increased inconsiderably, compared to practically healthy individuals, and was $1,029 \pm 0,04$ kg/m^3 without stimulation and $1,020 \pm 0,05$ kg/m^3 after stimulation. Compared to the control group, a tendency to reduced pH of non-stimulated oral fluid in 1,5 times was determined ($4,61 \pm 0,22$ relative units) and stimulated one – in 1,3 times ($5,82 \pm 0,24$ relative units). The viscosity of the non-stimulated oral fluid in patients increased in 2,4 times ($5,83 \pm 0,97$ cP) and stimulated one – in 1,9 times ($3,62 \pm 0,41$ cP) compared to the indices of the control group ($2,41 \pm 0,19$ cP without stimulation and $1,93 \pm 0,09$ cP after stimulation).

On the moment of sanitization completion in patients of the main group, there were no reliable changes found in the rate of salivation, specific gravity, pH, and viscosity of non-stimulated and stimulated oral fluid compared to the beginning of sanitization.

Therefore, type 2 diabetes mellitus is associated with the reduced rate of salivation both before and after stimulation, decreased concentration of hydrogen ions, and increased viscosity of the oral fluid with unchanged indices of specific gravity, which undoubtedly influences the quality of healing the cavity after tooth extraction and can result in complications in the form of the acute inflammatory process. Lack of the positive dynamics in laboratory findings of patients suffering from type 2 diabetes mellitus after surgical sanitization of the oral cavity promotes elaboration of preventive and therapeutic measures directed to primary elimination or correction of the determined disorders.

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COMBINED APPROACH TO THE TREATMENT OF THE SECONDARY ANODONTIA OF THE MAXILLARY CENTRAL INCISOR

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Nowadays, esthetic requirements play a crucial role in dentistry. The results of the survey by *EMNID Institute for Public Opinion Research* (Germany), conducted in June 2002, showed that 85% of respondents consider healthy teeth a sign of human attraction. According to the poll conducted by the *Bengerno Institute*, for 52,2% of Germans esthetically perfect teeth are of very important value, and for the rest 39,7%, it was always of great importance. Both advertisement and mass media in their announcements about “good-looking teeth” increase the interest of patients to the subject of esthetics.

Restoration of esthetic smile for a patient is often an important event moving back to the normalization of occlusion. The “beauty” of the teeth in the lip line is more important because the position of other teeth is visually invisible.

The patient was explained that only prosthetics would be not enough to achieve high esthetic results since the space for frontal teeth was insufficient. Due to this fact, the width of the teeth would be reduced considerably, and the gingival zenith would not correspond to the zenith of



artificial crowns. Therefore, an important rehabilitation stage for the patient should include a comprehensive approach consisting of orthodontic preparation (making space of a missing 1.1 tooth and simultaneous correction of II class) followed by a surgical stage of implantation and prosthetics by means of an artificial crown or its further replacement by means of dental bridge prosthesis.

After the braces were removed, a fixed retainer was applied on the lower frontal teeth from the lingual side. The patient rejected an offer to place an implant. She decided on dental bridge prosthesis on the basis of zirconium dioxide. Therefore, the following stage in the treatment was orthopedic preparation of 1.2, 2.1, and 2.2 teeth and making temporary dental bridge prosthesis. The final stage included adjustment and fixation of the orthopedic construction.

By means of a combined approach to an unusual clinical situation, esthetic of the smile and function of the dentition were restored, and the patient was satisfied with the treatment performed.

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**CASE REPORT: CLINICAL RESULT OF REVASCULARIZATION
OF A PERMANENT TOOTH**

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Earlier, it was believed that the regeneration of the pulpal tissue in the necrotized infected tooth with apical periodontitis (AP) is impossible. However, if the necessary conditions are created, regeneration is possible. Apexification is a method to induce a calcified barrier in a root with an open apex or the continued apical development of an incompletely formed root in teeth with necrotic pulps (American Association of Endodontists 2013). After apexification procedures, the immature permanent teeth are usually filled with root canal sealer and gutta-percha. The disadvantages of apexification procedures are that the canal walls remain thin and continued root development might not occur (Iwaya et al., 2001, Banchs, Trope, 2004), and such teeth are prone to fracture after root canal treatment. Recently, revascularization procedures have been recommended to treat immature permanent teeth with necrotic pulp tissue and/or apical periodontitis/abscess.

The aim was to implement revascularization of a permanent tooth with an unformed root apex with apical periodontitis in a child and evaluate clinical results after a follow-up examination.

In our case report, we evaluate the results of the revascularization of pulp tissue in an 11-years-old patient with the diagnosis: apical periodontitis of 4.5. Due to the opening of the 4 mm apex and the presence of thin dentin, walls prone to a possible fracture in the future, so it was decided to try to regenerate the pulp according to the method proposed by D.C. Rule, G.B. Winter, and S.I. Iwaya.

The root canal (RC) was disinfected with 20 ml of 5.25% sodium hypochlorite solution. After drying, a paste of ciprofloxacin, metronidazole, and minocycline (by Hoshimo method) was introduced at a depth of 8 mm. Tooth was closed with "Cavit". After 26 days, 4.5 was asymptomatic, fistula closed. After disinfection and cleaning, an endodontic probe was introduced into the RC at a depth of 15 mm to cause bleeding in the apex. MTA (Angelus) was carefully placed on a blood clot, and closed with a wet cotton ball and "Cavit". At the follow-up examination 6 months later, no symptoms were detected, no fistula signs, too. X-ray: complete radiographic healing. Control examinations one year later and then after 18 months showed that the symptoms were absent. The complicated formation of the root apex was observed.

Thus, this clinical case was followed up for a total of 18 months, and it can be considered a success that the walls acquired their normal thickness and strength, and the apex was further formed normally. Time will show whether the canal obliteration has occurred or apical periodontitis may develop at a later stage. Thus, if the canal is disinfected, a matrix has been created on which new tissue could sprout, crown sealing was provided, the regeneration is possible, even in teeth with unformed apex.