

Regenerative therapy to preserve the vitality of the dental pulp

Janet Kirilova

Regenerative methods for treating oral diseases are a new trend in dentistry. Through them, it is possible to preserve the vitality of the dental pulp, quickly restore the periapical lesions, complete the apex fixation of damaged teeth with incomplete root development, treat periodontal diseases, and others.

Regenerative therapy is applied to preserve the vitality of the damaged dental pulp through direct pulp capping. In the last twenty years, calcium silicate cements have been used. Unfortunately, the latter has a high cost, leading to the deposition of a significant amount of tertiary dentin, which reduces the volume of the dental pulp. Therefore, future endodontic treatment would be complicated and sometimes impossible.

As a regenerative method, we offer the restoration of pulp communication in reversible pulpitis using an A-PRF+ membrane. The A-PRF+ product is made from the patient's blood by centrifugation. First, 10 ml of blood taken by venipuncture is required. Then, it is centrifuged according to Shoukroun's method at 1300 rpm for 14 minutes. It works with blood plasma.

In sterile conditions, the dentinal wound and the communication with the dental pulp are treated with EDTA solution and ozone gas, and the communication site is covered with the prepared A-PRF+ membrane and glass-ionomer cement. After three months, the cavity is reopened, and the healing process is monitored - the lack of communication. The thickness of the formed dentin bridge can be determined through CBCT. Standard cavity obturation follows.

We followed a series of clinical cases that confirmed the method's success. It is essential to follow the sequence of the proposed protocol to preserve the vitality of the dental pulp to obtain a successful healing process. For this, the method of removing the infected dentin, the preservation of the affected dentin, their accurate dedifferentiation, accurate diagnosis of the dental pulp condition, the size of the communication, and others are important.