

Irrigation in endodontic

Abstract

Appropriate instrumentation, effective irrigation and decontamination of root canal spaces to apices, and obturation of the root canals are the key to successful endodontic treatment. The root canal irrigation is the prime in determining periapical tissue healing. When the root canal is shaped with rotatory instruments regular irrigation is required to remove the necrotic tissue, biofilms, and other debris from root canal spaces. There are many types of irrigation solutions and it has many properties. The properties of root canal irrigations are physical flushing of debris, high efficacy against anaerobic and facultative microorganisms organized in biofilms, tissue solvent, ability to inactivate endotoxin, ability to prevent the formation of a smear layer during instrumentation, low surface tension, biocompatibility, lubricant effect, Systemically nontoxic when they come in contact with vital tissues, noncaustic to periodontal tissues, and with little potential to cause an anaphylactic reaction. In many kinds of irrigations solutions, there have chlorine agents such as sodium hypochlorite (NaOCl), potassium hypochlorite (KOCI), an oxidizing agent such as hydrogen peroxide (H₂O₂), a chelating agent such as Ethylenediaminetetraacetic acid (EDTA), Organic acids such as citric acid, an inorganic acid such as H₂SO₄ and many others.

In those irrigation solutions, sodium hypochlorite is the main irrigation solution that is easily available. >1% NaOCl dissolves to the organic tissue and 0.5% kill the microbes effectively. The other irrigation solution Ethylenediaminetetraacetic acid (EDTA) is used for removing smear layer. Sterile water and saline are also used as an irrigation solution. The irrigants have been delivered into the root canal spaces by using syringe and metal needles which comes in many different size and tips design. But many clinical experience have shown that this classic approach result in ineffective irrigation. To improve the penetration and effectiveness of irrigation, the irrigation solutions have chemically modified and developed several mechanical devices such as automatic pump, sonic, or ultrasonic device. The overview of this abstract is the properties of irrigation solutions, procedures for safe and efficient irrigation, and provides information on the most recent developments.



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Biography

Mabin Sultana has completed his Master degree from Mandy dental college and hospital, Bangladesh. Present he is working as a Dental specialist at Bangladesh.



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