



Stepwise Excavation: A Conservative Community-Based Dental Treatment of Deep Caries to Inhibit Pulpal Exposure

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Dear Editor-in-Chief

Stepwise excavation is an old concept but has become a research subject more, in recent years. It is a conservative approach to treat deep dental caries lesions where the exposure of the pulp is probable. In case of pulpal exposure, Root Canal Therapy (RCT) is the routine treatment method. However, RCT is an expensive treatment, especially in countries like Iran where most of the dental treatments are not covered by insurance companies and therefore patients may become inclined to have their teeth extracted to avoid the RCT expenses. Consequently, this leads to poor dental health of people, which in turn affects overall health of the community.

This technique is indicated when the tooth has a large cavity with deep caries which jeopardizes the vitality of the pulp if complete excavation is done and exposure of the pulp happens. In this method, the caries should be removed partially to inhibit the pulp exposure. Afterwards, the cavity should be restored by a suitable material to seal hermetically the cavity. It is suggested that after 2-24 months, the cavity be re-opened,

the remaining caries be excavated, and the tooth be restored permanently.

The important thing in this technique is good case selection and sealing of the cavity. Cases with deep caries with unbearable pain, disturbed night sleep that shows irreversible pulpitis, PDL widening and sensitivity to cold, hot and percussion that prolongs more than normal healthy tooth, are not good candidates for this technique. Different materials have been suggested as a liner to cover the remained caries before restorative material is applied. Calcium hydroxide is the most common material with antibacterial activity that helps in decreasing the number of bacteria in the cavity. This material should be covered by a restorative one.

Studies have shown that treatment of the teeth with this technique will decrease the number of pulpal exposures and preserves the tooth vitality. As a conclusion, this technique is a conservative community-based treatment, which helps the public dental health with less expense while maintaining pulp vitality.