

**A STUDY OF CERTAIN CORE MATERIALS**

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**REVEIW OF LITERATURE:**

The cast Post and Core can be used to build up the coronal part of the broken tooth (1,2). Cast post and core may be very difficult to be used to replace the coronal part of posterior teeth. Also in some cases, the root canals may be curved, narrowed or short, so cast post and core will not be used (3 & 4).

Amalgam alloys (S,6), composite resins (7.8) and reinforced Glassionomers(g,Io) can be used as core materials to replace the coronal tooth structure. Then the core can be prepared for a cast restoration.

The restorative materials that can be used as a core should have an adequate mechanical properties to resist masticatory forces without fracture. It was found that, amalgam alloy is the best filling core build up material because of its adequate strength properties and adaptability to the tooth surface(1 I). While Oliva and Low (12) (1986) stated that composite resin is one of the most commonly used material to replace the coronal part of broken teeth. Visible light cured composite can be easily manipulated to build up the coronal part of the tooth.

Mclean and Gasser(9) 1985 found that the reinforced glass ionomer as a core build up material has an adequate strength properties, chemically bonded. to the tooth structure, does not discolor the tooth and is tooth color match. It was found that the reinforced glass ionomer core with a post will resist fracture under displacement forces.

Gelfand and his Co-workers(12) (1984) concluded that the post reinforces the weakened tooth and provides retention for the core material. While Marzouk(II) and his Co-workers stated that posts are used for retaining the restorative core material only.

The aim of the present investigation IS to study the effect of time on certain properties of different restorative materials that can be used as a core material, as well as to correlate between these properties and to calculate the strength properties after (x) time using statistical analysis.

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