

THE EFFECT OF DIFFERENT TYPES OF DENTIN ADHESIVES ON TRAUMATICALLY EXPOSED PULP

Arm M. Abdalla* , Wegdan M. Abdel Fatah* and Manal I. El Nouaem.**

ABSTRACT:

A comparative study of four types of dentin adhesives (Scotch bond, Single bond, All bond II and Amalgam bond) was carried out. The effect of different types of dentin adhesives on traumatically exposed pulp was the aim of this study. Three adult dogs were used, and forty eight teeth were selected for this study, sixteen teeth in each animal. The teeth to be treated were isolated with rubber dam, and a class V cavity was prepared in each tooth in the buccal surface of the maxillary and mandibular posterior teeth. The cavities were oval in shape, and an exposure was then made into the coronal pulp chamber, and hemorrhage was controlled with a sterile cotton pellet. Each pulp was directly capped by one of the different dentin adhesives and placed according to manufacturers instructions. Then composite resin was inserted in the cavities. The animals were sacrificed at (7,14 & 30) days. The maxillae and mandibles were removed and the teeth were sectioned. The sections were stained with hematoxylin and eosin and examined under microscope. Histologic evaluation of all materials was based on the ranking of each tooth, using a specific criteria. Slight inflammation was the main reaction. Irreversible injury to the odontoblast closest to the site of cavity preparations resulted in the death of these cells. The persistence of unresolved chronic inflammation was associated with the lack of calcific bridge formation in this study.

*Lecturer, Conservative Dentistry Dept., Faculty of Dentistry, Alexandria University

** Lecturer, Oral Pathology Dept. Faculty of Dentistry, Alexandria University.