Bölüm 5

Universal Adezivler

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Adezivlerin Tarihçesi

Dental adezivlerin tarihi 1949 yılında İsviçreli kimyager Hagger'in patent başvurusu yapmasıyla başlamıştır. Hagger akrilik rezini dentine bağlamak için bugün hala Kerr markasının adezivlerinin içinde bulunan gliserofosfat dimetakrilat (GPDM) adı verilen fonksiyonel monomeri kullanmıştır. 1955 yılında Buonocore'un "asitleme tekniğini'' (acid-etch technique) keşfetmesiyle birlikte mine dokusuna etkili bir adezyon sağlanmıştır (1).

1970'lerin sonlarına doğru dental adeziv teknolojisinde yapılan çalışmalar çeşitli fonksiyonel monomerlerin sentezlenmesine odaklanmıştır. Bu çalışmalar sonucunda Phenyl-P ve HEMA gibi polimerize olabilen fosfatlar Bis-GMA rezinlere ilave edilmiştir (2,3).

Birinci ve ikinci nesil adezivler kavite preparasyonu sebebiyle oluşan smear tabakasına etki etmedikleri için smear tabakası üzerine uygulanan adezivler olarak literatüre geçmiştir. Bu adezivlerin kullanımlarında smear tabakasının dişe zayıf bağlanmasından dolayı yeterli bağlantı gücüne ulaşılamamıştır (4).

Dental adeziv teknolojisinde dönüm noktası 1982 yılında Nakabayashi'nin "hibrit tabaka" terimini dentin yüzeyinin demineralizasyonun ardından monomerlerin infiltrasyonu ve polimerizasyonu olarak tanımlamasıdır (5). Bu tanımlamadan sonra diş dokusu ile kimyasal etkileşim kavramından uzaklaşan

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stabilitesini sağlamak için 2.5'ten düşük olmamalıdır. Ancak daha yüksek pH, universal adezivlerin etching ve dolayısıyla bağlanma etkinliğini azaltır (2).

Bu eksikliklerin üstesinden gelmek ve universal adezivler ile daha güçlü ve uzun süreli bağlantı elde edebilmek için daha fazla sayıda *in vivo* ve *in vitro* çalışmaya ihtiyaç vardır.

Universal adezivler, içeriklerine göre farklı kullanım yöntemleri gerektirebilir. Klinisyenlerin kullanacakları adezivi seçerken adezivlerin içeriğini, üretici talimatlarını, kavite konfigürasyonunu göz önünde bulundurarak seçim yapmaları gerekmektedir. Literatürdeki çalışmaların çoğunda universal adezivlerin minede etch and rinse modunda, dentinde self etch modunda aktif uygulanması önerilmiştir. Çift tabaka adeziv uygulaması dentinde bağlantıyı çoğunlukla arttırırken, mineye bağlanmada çelişkili sonuçlar vermektedir.

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