

Bölüm 9

ENDODONTİDE SMEAR TABAKASI VE UZAKLAŞTIRMA YÖNTEMLERİ

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Kök kanalı şekillendirmesi yapılırken kök dentini el aletleri ya da döner aletler ile eğelenir, eğeleme işlemi sırasında mineralize dokular parçalanır ve değişik miktarlarda debris meydana gelir. Debris içinde bulunan ve oldukça küçük boyutlarda olan kollajen matriks parçaları dentin yüzeyini kaplayarak smear tabakasını oluşturur. Smear tabakası ancak Taramalı Elektron Mikroskobu (SEM) altında gözlemlenebilen bir yapıya sahiptir.

Smear tabakası ilk olarak Boyde ve Knight tarafından kesilmiş mine yüzeyinde gözlemlenmiştir (1). Smear tabakasının içeriğini organik ve inorganik maddeler oluşturmaktadır. Organik yapının içeriği kan hücreleri, nekrotik pulpa artıkları, canlı pulpa artıkları, mikroorganizmalar, proteinler ve odontoblastlardan oluşmaktadır. İnorganik yapısı ise kök kanallarının temizlenmesi ve şekillendirilmesi sırasında oluşan dentin talaşlarından oluşmaktadır (2). Araştırmacılar smear tabakasının kalınlığının 0.5-15 µm arasında olduğunu belirtmektedirler. Goldman ve ark. (3), smear kalınlığını yaklaşık olarak 1 µm olduğunu, içeriğinin büyük ölçüde inorganik olduğunu ve şekillendirilmiş kanal yüzeyi boyunca bulunduğunu belirtmişlerdir. Mader ve ark. (4) ise, smear tabakası kalınlığının genellikle 1-2 µm olduğunu bildirmiştir. Cameron ve ark. (5) ve Mader ve ark. (4) smear tabakasını iki aşamada değerlendirmişlerdir. İlk tabakayı yüzeyel smear tabakası, ikinci tabakayı ise dentin kanallarına penetre olan derin kısım. Dentin kanallarına penetre olan derin katman 6- 40 µm kadar dentin tübüllerinin içine girebilir ve çok kuvvetli bir şekilde dentin kanallarına adapte olarak tıkaç gibi tübülleri tıkayabilir. Yüzeyel katman ise 1-5 µm kalınlığındadır ve dentin yüzeyine daha zayıf bir şekilde tutunur. Brannstrom ve Johnson (6) ve Mader ve ark. (4), kanal şekillendirmesinde kullanılan aletlerin fırça etkisi göstererek smearı dentin kanallarına doğru ittiğini ve dentin yüzeyine bulaştırdığını belirtmişlerdir. Bununla birlikte, Cengiz ve ark. (7), kanal şekillendirme sırasında kullanılan materyalle dentin tübülü arasında oluşan adeziv kuvvetlerin bir sonucu olarak smearın den-

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