Bölüm 10

ORTODONTİK DİŞ HAREKETİNİN HIZLANDIRILMASI

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GİRİŞ

Ortodontik tedavi görmek isteyen hastaları en çok rahatsız eden konulardan birisi de tedavi süresinin uzunluğudur. Tedavi süresi ortalama 24-36 ay arasında değişmekte olup (1,2), süre uzadıkça çürük gelişme riskinde artış görülmesi (3,4), kök rezorbsiyonları görülmesi (5,6) ve hasta kooperasyonunun azalması (7) gibi olası komplikasyonların görülmesine yol açmaktadır. Bu nedenlerden ötürü diş hareketini hızlandırmak ve tedavi süresini kısaltmak için geleneksel uygulanan kuvvetlere ek olarak, çevre dokularda yıkımı arttıracak, hücre aktivitelerini artıracak çeşitli yöntemler uygulanmaktadır.

Dişe mekanik kuvvet uygulandığında diş ve çevre dokularda remodeling sürecinin de dahil biyolojik reaksiyonlar görülmektedir. Dişlere ortodontik kuvvet uygulaması sonucunda, periodontal ligamentte kan akımında değişiklikler oluşmakta ve periodontal aralığa çok sayıda çeşitli mediatör salınımı gerçekleşmektedir. Salınan bu mediatörler yapım-yıkımı da barındıran çeşitli hücresel ve bölgesel aktivasyonların başlamasında rol oynar. Tüm bunlar genel olarak bilinse ve söylense de ortodontik diş hareketinin net bir açıklaması halen yoktur

Günümüzde yapılan çalışmalar neticesinde, diş hareketi oluşmasında uygulanan mekanik kuvvetlerin tek etken olmadığı görülmüş (8), ortodontik diş hareketlerini daha hızlı gerçekleştirebilmek için kimyasalların kullanımına (9),elektromanyetik uyaranların kullanımına (10,11), lazer uygulamasına (12) ve cerrahi (13,14) uygulamalarının yapılmasına olan ilgi giderek artmaktadır.

Diş hareketini hızlandırmak amacıyla gerçekleştirilen uygulamalar; kimyasal, mekanik ve cerrahi yöntemler olmak üzere esasen üç ana başlıkta incelenmekte

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