

Bölüm 3

RESTORATİF MATERYALLERİN TEMEL MEKANİK ÖZELLİKLERİ VE BU ÖZELLİKLERİN BELİRLENMESİNDE KULLANILAN TESTLER

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RESTORATİF MATERYALLERİN MEKANİK ÖZELLİKLERİ VE KLİNİK BAŞARI

Diş hekimliğinde başarı hasta ile ilgili faktörler, tedavi edilen diş, kullanılan materyaller ve uygulanan tedavi şekli gibi birçok etkene bağlıdır. Restoratif diş hekimliğinde kullanılan materyallerin fiziksel, kimyasal, mekanik ve biyolojik özellikleri oldukça önem taşımaktadır. Bir restoratif materyalin klinik başarısı öncelikle kabul edilebilir laboratuvar test sonuçları verebilmesiyle incelenmekte ve tahmin edilmektedir.

Restoratif dental materyal özellikleri şu şekilde sınıflandırılabilir: Kimyasal özellikler: korozyon, higroskopik, çözünürlük, pH duyarlılığı, reaktivite, yüzey enerjisi ve yüzey gerilimi. Mekanik özellikler: kırılma dayanımı, baskı dayanımı, sünme, elastik modül, yorgunluk dayanımı, kırılma dayanımı, sertlik, mikro çekme dayanımı, Poisson oranı, oransal sınır, makaslama dayanımı, çekme dayanımı ve akma dayanımı. Üretim aşamasındaki önemli özellikler: maliyet, kırılma dayanımı, akma direnci, sertlik, erime sıcaklığı veya erime sıcaklık oranı, cilalanabilirlik (Anusavice, Shen & Rawls, 2013).

Materyal performanslarının belirlenmesinde hem laboratuvar hem de klinik deneyler kullanılmaktadır. Laboratuvar testleri klinik simülasyonu birebir sağlamasa da temel laboratuvar testleri ile elde edilen bilgiler yüksek öneme sahiptir (Wang & ark., 2003). Laboratuvar testleri aracılığıyla materyalleri karşılaştırmak ve klinik deneyleri yorumlamada rehber olmak üzere standardize ölçümler elde edilir (Anusavice, Shen & Rawls, 2013). Bunun yanında laboratuvar testlerinin tercih edilmesinin bazı avantajlarını şöyle sıralayabiliriz: belirli bir parametre hakkında hızlı veri toplanabilmesi, yaygın kullanılan testlerin göreceli kolaylığı,

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var testleri kullanan çalışmalarla ilgili diğer bir önemli husus aynı parametrenin değerlendirilmesinde kullanılan farklı metodların sonuçlarının her zaman birbiriyle karşılaştırılamamasıdır. Bu kısıtlamanın sebebi çeşitli tetkik yöntemlerinin birbirinden farklı çalışma sistemleri veya örnek tasarımlarına sahip olmasıdır. Dolayısıyla farklı çalışmaların sonuç kıyaslamaları yapılırken kullanılan analiz yöntemleri hakkında bilgi edinilmelidir.

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