

Kas ve İskelet Sistemi

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Giriş

Yaşlanma, yavaş yavaş meydana gelen olgunlaşma ve ihtiyarlık arasında bir dengedir ki hücre bölünme, büyüme ve fonksiyon kapasitesinin zamanla kaybı ve sonunda ölüme götüren bir süreçtir. Bu durum, tüm organ sistemlerini kapsayan birçok hastalığa olan duyarlılığın artışıyla korelasyon göstermektedir. Yaşlanma çoğu nörodejeneratif, metabolik, kardiyovasküler ve kas iskelet sistemi ile ilgili sıkıntılı durumlar için en önemli risk faktörü olarak değerlendirilmektedir. Yaşlı popülasyonda; kas, kemik, eklem kıkırdağı, tendon gibi kas-iskelet sistemindeki değişiklikler, sıradan bir yıpranma sürecinden ziyade farklı mekanizmaların bir etkileşimi gibi durmaktadır. Bu bölümde, bu karmaşık mekanizmaların içerisinde yer alan kas-iskelet sistemindeki değişikliklere yer verilecektir.

I. Genel Bakış

Dünya çapında, 2015 yılında 65 yaş ve üstü kişi sayısı 617 milyondan üç kat artış ile 2050 yılında 1.57 milyar olması beklenmekte iken 80 yaş ve üzeri kişi sayısının ise üç katından daha da fazla artarak 126 milyondan 446 milyona çıkacağı beklenmektedir (1). Kas-iskelet sisteminde yaşlanmanın etkisi toplumun büyük bir kısmını etkilemektedir ve öncelikle kas, kemik, kıkırdak ve tendon etkilenmektedir. Sarkopeni, güç ve fiziksel dayanıklılıkta azalma ile sonuçlanan yaşa bağlı kas kitlesinde kayıp olan kompleks bir durumdur. Yaşlı hastalarda azalmış kas kitlesi ve gücü, postur kontrolü ve azalmış kemik kalitesine bağlı düşük enerji mekanizmaları daha fazla düşme ve kırık yakınmalarına neden olur (2). Osteoporoz, yaşlı popülasyonda çok yaygındır; 10 milyondan fazla Amerikalıda tahmin edilmektedirken 43 milyon kişide ise düşük kemik dansitesi mevcut olduğu bilinmektedir (3). Osteoartrit sıklığı ve yaş artışı arasında direkt korelasyon mevcuttur ancak kesin patogeneze büyük oranda netleşmiş değildir (1). Tendonlarda, kollajen

tendonlarında yaygın ortaya çıkan yırtık bölgeleri olup hipovasküler alanlar olmalarıyla da korelasyon göstermektedir (51, 52).

Sonuç olarak, yaşlılarda kas, kemik, eklem kıkırdağı, tendon olmak üzere kas-iskelet sistemindeki değişiklikler, basit bir “aşınma ve yıpranma” sürecinin çok ötesine geçen farklı moleküler mekanizmaların karmaşık bir etkileşimi olduğunu göstermektedir. Moleküler ve hücresel düzeydeki bu değişiklikler, anestezi ve cerrahi uygulamalarında farklı klinik sonuçlara yol açabilir. Kas iskelet sistemindeki yaşlılıkla ilişkili bozuklukların ve sorumlu mekanizmaların bilinmesi anestezi uygulamalarında daha iyi tedavi modalitelerinin gelişmesini destekleyecek, daha aktif, ağrısız, sağlıklı yaşama katkı sağlayacaktır.

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