

Metabolik Değişiklikler ve Elektrolitler

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Giriş

Yaşlanma, klinik olarak doku ve organların hem yapısal hem de işlevsel kapasitesindeki dejeneratif değişikliklerle karakterize ilerleyici fizyolojik bir süreçtir (1). Yaşlılığa bağlı olarak görülme sıklığı artan hastalıkların eşlik etme riski nedeniyle, ayrı bir grup olarak değerlendirilen yaşlı hastalarda perioperatif morbidite ve mortalite riski daha yüksektir (1, 2). Kronik hastalık yokluğunda dahi, yaşlılarda organ fonksiyonları bazal metabolik ihtiyaçları karşılamak için yeterli olsa da tüm sistemlerdeki fonksiyonel rezerv ile maksimum kapasitedeki önemli ölçüde azalma akut hastalık cerrahisi ile ilişkili artan ihtiyacı karşılayamayabilir. Sonuçta yaşa bağlı kronik hastalık ve daha az ölçüde, fonksiyonel kapasitenin ilerleyici kaybı, yaşlı cerrahi hasta popülasyonunda görülen perioperatif komplikasyonlardaki artışı açıklar. Bu nedenle, yaşlı hastalarda optimal anestezi yönetimi, eşzamanlı hastalıkların yeterli teşhis ve tedavisini, hazırlık ve pozisyonel detaylarda dikkatli olmayı ve anestezi ve adjuvan ilaçlar için gerekli doz ayarlarına izin veren monitörizasyon tekniklerinin kullanılmasını gerektirir (2). Bu bölümde yaşlılardaki metabolik değişiklikler ve elektrolit dengesi tartışılacaktır.

I. Fonksiyonel Rezerv Kavramı

Yaşlanma bir patolojik bir durum olmayıp, aksine biyolojik sürecin yaşlanmasını ifade etmektedir. Stres durumlarında progresif yaşlanma ile birlikte, regülatuar biyolojik işlevsellikte ve vücudun normal dengesini koruma yeteneğinde azalmaya eğilim olduğu bilinmektedir. Bu fenomen özellikle fonksiyonel rezervi azalmış kişilerde oldukça yaygındır. Fonksiyonel rezerv, fizyolojik ya da patolojik stres olarak tanımlanan değişiklikler karşısında vücudun fonksiyonlarını koruyabilme yeteneği olarak tarif edilir. Yeterli fonksiyonel rezerv fizyolojik ihtiyaçların arttığı durumlarında vücut hemostazının sürdürülebilmesidir. Azalmış fonksiyonel rezerv ise stres durumlarında vücudun stabil fonksiyonlarını sürdürülme

(101, 102). İlaç eliminasyonu yaşlılarda azalarak yüksek kan konsantrasyonlarına ulaşarak A tipi yan etki (abartılı veya aşırı fakat başka bir şekilde normal ilacın farmakolojik etkisi) olasılığı artar (103, 104). Aslında, yaş artışıyla yan etkilerdeki artış arasında doğru orantı vardır (105). Geriatrik hastaların ilaç yan etkileriyle karşılaşma oranı üç kat daha yüksektir (106). Ayrıca, ilaç yan etkileri verilen ilaç sayısıyla artmaktadır. Bu nedenle, perioperatif dönemde birkaç etkili ilaç, hatta kısa etkili ilaçların eklenmesi, istenmeyen reaksiyonları daha muhtemel hale getirmektedir (107). Bu durum ileri yaş ve eşlik eden hastalıkların varlığı sonucu ortaya çıkan çoklu ilaç kullanımının eşlik etmesiyle daha da karmaşıklaşmaktadır (108, 109).

Sonuç olarak, yaşlı hastanın perioperatif takip ve tedavisi zordur ve yaşlanmayla beraber fonksiyonel rezerv kademeli olarak azalır. Bu duruma yaşlı hastaların ek hastalık, cerrahi veya travma gibi sebeplere bağlı stresle başa çıkma yeteneğini de azaltır. Bu bilgiler her yaşlı hasta için en uygun anesteziyi sağlamada yardımcı olacaktır. Tüm bu sebeplerden dolayı, perioperatif dönemdeki yaşlı hastaların metabolik anormallikleri iyi bir şekilde tespit edilmeli, gerekli ise tedavisi düzenlemeli ve yakın takip altına alınmalıdır.

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