BÖLÜM 36

ACİL HEMODİYALİZ VE HEMOPERFÜZYON

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ACİL HEMODİYALİZ - GİRİŞ

Hemodiyaliz (HD), bir cihaz eşliğinde böbreklerden fazla sıvı, çözünen maddeler ve toksinlerin yapay membran aracılığıyla uzaklaştırılması ile beraberinde dengenin korunmasına yardımcı, tüm dünyada yaygın olarak kullanılan, bir renal replasman tedavi (RRT) yöntemi olarak bilinmektedir (1). Akut böbrek yetmezliği (ABY) gelişen hastaların %70'inde HD, hemofiltrasyon, hemodiafiltrasyon, yüksek akımlı diyaliz ve plazma filtrasyonu gibi farklı su ve çözünen madde transferinin kullanıldığı herhangi bir RRT yöntemi uygulanmaktadır (2).

Amerika Birleşik Devletleri'nin 2021 yılı verilerinde RRT hastalarının %84'ünün HD tedavisine başladığı belirtilirken (3), Türkiye'de 2022 yılı Türk Nefroloji Derneği verilerine göre bu oran %74,9 olarak verilmiştir (4).

HD, yarı geçirgen bir membran boyunca çözünen maddeleri difüzyon yolu ile uzaklaştırır. Bu süreç, konsantrasyon gradiyenti tarafından yönlendirilen yarı geçirgen bir zar boyunca çözünen maddelerin hareketini içermektedir. Diyaliz sıvısı, konsantrasyon farkını en üst düzeye çıkarmak için kan ve diyalizatın zıt yönlerde aktığı bir difüzyon gradiyenti oluşturur (5). Çözünen maddeler 3 kategoriye ayrılmaktadır. Küçük moleküller (<500 Dalton) difüzyon yolu ile, orta moleküller (500-1500 Dalton) difüzyon ve konveksiyon ve büyük moleküller (>1500 Dalton) öncelikle ultrafiltrasyon (UF) yapıldığında oluşan konveksiyonla temizlenir. Konveksiyon, plazma suyunu hidrostatik basınç altında bir membrandan filtreleyerek, küçük ve orta molekül ağırlıklı çözünen maddelerin suyla birlikte taşınmasını kolaylaştırır. Yeterli bir plazma hacmini korumak ve çözünen maddeyi arttırmak için bir değiştirme sıvısı kullanılır. Çözünen maddelerin hidrostatik basınç gradiyenti boyunca hareket etmesini sağlar. UF işlemi ise basınç gradiyenti (hidrostatik, ozmotik veya onkotik) tarafından yönlendirilen yarı geçirgen zarlardan suyun uzaklaş-

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