Bölüm 11

ANTİBİYOTİK DİRENCİNİ AŞMA YAKLAŞIMLARI: DIŞARI AKIŞ POMPASI İNHİBİTÖRLERİNİN SIRADIŞI POTANSİYELİ VE TERAPÖTİK UYGULAMALARININ DERİNLEMESİNE İNCELENMESİ

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1. GİRİŞ

20.yüzyılın başlarında penisilin ve streptomisin keşfiyle, daha önce ölümcül sayılan bakteriyel enfeksiyonların kolayca tedavi edilebildiği antibiyotik çağına girdik. 20. yüzyılın ortaları, bugün kullanılan antibiyotiklerin yaklaşık yarısının bu dönemde keşfedilmesi nedeniyle antibiyotik keşfinin 'altın çağı'na tanıklık etti (1).

Antibiyotikler, bakteriyel enfeksiyonları tedavi etmek için kullanılan etkili ilaçlardır. Ancak, antibiyotiklerin yaygın ve yanlış kullanımı ve suiistimali, bakterilerin evrimini hızlandırarak antibiyotiğe dirençli bakterilerin ortaya çıkmasına neden olmuştur (2).

Çoklu ilaç direnci (MDR), tanımı gereği, bakterilerin, duyarlı suşların ortadan kaldırılmasında etkili olabilecek, etki mekanizmaları ve yapıları bakımından farklı olan öldürücü dozlardaki ilaçlara dayanma yeteneğidir. Efluks pompaları (EP›ler), amaçlanan hedeflerine ulaşmadan önce antibiyotikleri tanıyan ve çevreye salan, tüm bakteriyel plazma zarlarının bileşenleri olan proteinlerdir (3).

Son yıllarda çoklu ilaca dirençli bakterilerin neden olduğu enfeksiyonlar, dünya genelinde önemli bir sağlık sorunu haline gelmiştir. Bu bakterilerin tedavi seçeneklerinin giderek azalması, insan sağlığı için endişe verici bir durum oluşturmaktadır. Günümüzde, pek çok antibiyotiğe karşı direnç kazanmış olan bu bakteriler, enfeksiyonların tedavisinde kullanılan ilaçların etkinliğini azaltmaktadır (4).

Akış pompası inhibitörleri bakteri hücresinin hayatta kalmasını desteklemek ve toksik metabolitleri uzaklaştırmak için sistematik olarak birlikte çalışan zara

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