

Bölüm 3

METİSİLİN DİRENÇLİ *Staphylococcus aureus* HIZLI TANISINDA KULLANILAN BESİYERLERİ ve MOLEKÜLER TESTLER

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GİRİŞ

Mikroorganizmaların insanlara ve ayrıca tüm dünyaya sağladığı pozitif ve negatif özellikler detaylı bir şekilde bilinmektedir. Mikroorganizmalar başta gıda endüstrisi, biyoteknoloji ve modern genetik mühendisliğinde olmak üzere geniş çapta kullanılmaktadır. Bununla birlikte, bazı mikroorganizmalar özellikle insanlar için hayati tehlikeye sebep olabilen gıda bozulması veya ciddi seyreden bir hastalığa neden olabilir. Bu iki olumsuz etki nedeniyle, gerçek numunelerdeki mikroorganizmaların hızlı tespiti ve tanımlanması, tıptan sanayiye, insan hayatını etkileyen çok çeşitli alanlarda gerekli ve aynı zamanda önemli bir husustur^(1,2). Ne yazık ki, klasik mikroorganizma tanımlama yöntemleri zaman almakta ve yoğun emek gerektirmektedir. Ayrıca duyarlılık saptanmasında kullanılan disk difüzyon, mikrodilüsyon gibi antimikrobiyal duyarlılık test yöntemleri saf kültürde mikroorganizmanın üretilmesinden sonra en az 24 saat inkübasyon gerektirir⁽³⁾.

Bu mikroorganizmalardan metisiline dirençli ve metisiline duyarlı *Staphylococcus aureus* (MRSA ve MSSA)'un tespiti klinik öneme sahiptir. MRSA izolatlarının hızlı ve doğru tanımlanması sadece hasta bakımı için değil aynı zamanda etkili enfeksiyon kontrolü için de gereklidir^(4,5).

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duyarlılık ve %88.6 özgülük ile 24 saat içinde (3 saatlik deney çalışma süresi ile) elde edilmiştir ⁽⁴⁰⁾. Patojene özgü PZR sisteminin bir başka örneği GenomEra MRSA/SA testidir (Abacus Diagnostica, Turku, Finlandiya) ⁽⁴⁶⁾. Bu test piyasada bulunan ilk homojen PZR testidir ⁽⁴⁷⁾. MRSA tanısında yüksek duyarlılık (%99.3-%100) ve özgülük (%100) sağlayan GenomEra MRSA/SA testi seçici ve seçici olmayan kültürlerle birlikte kullanılmaktadır ve bu nedenle GenomEra testi ile aslında MRSA saptaması için toplam süre 16-24 saattir ⁽⁴⁷⁾. Bu şekilde PZR tabanlı MRSA saptama süresi 30 dk ile 5 saat arasında değişen çok sayıda test bulunmaktadır ⁽⁴⁸⁻⁵⁰⁾ ve bunların arasına her geçen gün yenileri eklenmektedir.

SONUÇ

Mikroorganizmaların tanımlanması için hızlı, düşük maliyetli, duyarlı ve tekrarlanabilir yöntemlerin geliştirilmesi modern bilimde önemli bir konudur. MRSA suşlarının hastanelerde ve diğer sağlık sistemlerinde yaygınlaşması her ne kadar ülkemizde Gram negatif mikroorganizma direncinde daha belirgin bir artış olsa da dünya çapında önemli bir sorun olmaya devam etmektedir. Geleneksel yöntemlerin sonuçlarının elde edilmesi genellikle 2-3 gün sürer. Konvansiyonel olmayan ve konvansiyonel hızlı yöntemler artık piyasada bulunmaktadır ve metisilin direncinin doğrulanması ve MRSA'nın doğrudan klinik örneklerden saptanması için değerli birer araç haline gelmektedir.

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