13. BÖLÜM

MİKROBİYOTA ve YOĞUN BAKIM UYGULAMALARI

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Yıllar boyunca modern tıp uygulamaları ile insanlardaki bakterileri eradike etmek üzerinde çokça çaba harcandı. Ancak, vücudumuzdaki komensal mikroorganizmaların insan fizyolojisinde anahtar rol oynadığının anlaşılması ile bu faydalı mikroorganizmaların korunması ile ilgili stratejiler ve bunların hastalıkların tedavisinde kullanılması ile ilgili çalışmalar yaygınlaşmaktadır.

Bir organ sisteminde yerleşen tüm organizmalara mikrobiyom; bu organizmaların genomlarının tamamına mikrobiyota denir (1). Bu iki terim medikal literatürde bazen bir biri yerine kullanılabilmektedir. İnsan mikrobiyomu bakteri, virüs, mantar, arkea ve tek hücreli ökaryotlardan oluşur. İnsan vücudundaki insan hücresi sayısı ile bakteri hücre sayısı hemen hemen eşittir (2). İnsan geni sayısı yaklaşık 20 000 (yirmi bin) iken vücudumuzdaki mikrobiyal gen sayısı 2-20 milyondur. Bir başka deyişle genetik temel olarak %1 insan, %99 ise bakteriyel kökenliyiz (3). İnsan mikrobiyotasının büyük kısmı sindirim sistemi, solunum sistemi, genitoüriner sistem ve deride kolonize olmuştur. Mikrobiyotamızın %70'inden fazlası kolonda bulunur (4).

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