Bölüm 11

MİKROBİYOTA İLE BİYO-PSİKO-SOSYAL SAĞLIK İLİŞKİSİ

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Komşu komşunun külüne ve
mikrobuna muhtaçtır.

Giriş

İnsan mikrobiyotası; yüksek çeşitlilikteki yararlı ve patojenik mikroorganizmaların iç ekosistemi olarak tanımlanır (Garcia-Pena ve ark., 2017). Mikrobiyotanın sahip olduğu genetik materyal mikrobiyom olarak adlandırılıp, mikrobiyota ve mikrobiyom terimlerinin birbiri yerine kullanılabilmektedir (Mackos ve ark., 2016). Mikrobiyota, virüsler, mantarlar, arkeler ve bakterilerden oluşan mikropların zengin bir bileşimidir (Strandwitz, 2018). Doğum sırasında; annenin deri, fekal ve vajinal florası ile erken dönemde kolonize olarak oluşan ilk mikrobiyota zamanla değişkenlik ve farklılık gösterir (Tirandaz ve ark., 2018) (Şekil 1). Annenin mikrobiyotası ve doğum tipi gibi dış etkenler yenidoğanın mikrobiyotasının çeşitliliğini etkiler. Bebek beslenmeye başlar başlamaz bağırsak mikrobiyotası da oluşmaya başlar (Garcia-Pena ve ark., 2017).

Bağırsak mikrobiyotası, gastrointestinal sisteme (GİS) yerleşen kompleks bakteriyel topluluktur. GİS, 100 trilyon mikrobiyal hücreye ev sahipliği yapar ve bunlar *Firmicutes* (%60-65), *Bacteroidetes* (%20-25) ve *Proteobacteria* (%5-10)'lardan oluşur (Hamasaki, 2017). İnsan bağırsak mikrobiyotası 2-3 yaşına kadar değişken olup beslenme, barınma, antibiyotik kullanımı ve genetik faktörler tarafından etkilenir ve 3 yaşından sonra değişmeden kalır (Garcia-Pena ve ark., 2017).

Mikrobiyotanın; metabolik ve bağışıklık sisteminin sağlığının sürdürülmesinde, nörogenezis ve santral sinir sistemi ile enterik sistem arasındaki ilişkinin düzenlenmesinde önemli etkileri belirlenmiştir (Strandwitz, 2018).

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Sağlık ve mikrobiyotalar arasındaki ilişkinin öneminin vurgulanmasının yanı sıra, bu mikroorganizmaların yiyeceklerle olan ilişkisi değerlendirildiğinde, bitkisel beslenenlerde *Roseburia, Lachnospira* ve *Prevotella* oranının, proteinle beslenenlerde ise, *Akkermansia* ve *Bifidobacterium* oranının yükseldiği, *Clostridiaceae/Clostridium* oranının ise azaldığı bildirilmiştir. Domuz içeren gıdalarla beslenenlerde *Bacteroides, Turicibactor* ve *Bilophila* artarken, balıkla beslenenlerde *Bifidobacterium, Adlercreutzia, Lactobacillus, Streptococcus* ve *Akkermansia muciniphila* oranlarının artttığı belirtilmiştir (Caesar ve ark., 2015; Danneskiold-Samsoe ve ark., 2018). Sun ve ark. (2018) yeşil çay gibi içeceklerde *Bifidobacterium, Lactobacillusspp.* ve *Enterococcusspp* gibi mikrobiyotalarda artış olduğunu belirlemişlerdir.

Mikrobiyomların yararlı etkisinin anlaşılmaya başlanması ile birlikte yiyecek ve ilaç endüstrisinde probiyotikler olarak adlandırılan birçok gıda ürünlerinin tüketilmekle birlikte birçok otoimmün hastalık artmaktadır. Bu nedenle bu hastalıklarda feçes nakli gibi tedavi yöntemlerinin yanında psikolojik ve çevresel etkenlerin de ele alınması gerekir. Özellikle, fiziksel çevreye ilişkin olarak, temizlikte kullanılan kimyasal ürünlerin, patojenlerle birlikte, yararlı mikroorganizmaları da tahrip ettiği, sezeryanla doğumun artması nedeniyle yeni doğanın annesinin mikroorganizmalarıyla kolonize olmasının gecikmesi ve engellenmesi, çekirdek ailenin yaygınlaşması nedeniyle kolonizasyonun çeşitliliğinin azalması ve şehirleşme oranlarının artmasıyla komşuluk ilişkilerinin zayıflayarak mikrobiyota çeşitliliğinin sınırlandırılması gibi durumların otoimmün hastalıklar başta olmak üzere bir çok dejeneratif hastalıkların ortaya çıkmasına yol açabilmektedir. Bu nedenle mikrobiyota kavramının anlaşılması ve yararlarının farkına varılarak her mikroorganizmadan korkulmamasının, sadece biyolojik ve psikolojik sağlığı değil, aynı zamanda insanların birbirileriyle olan ilişkilerini arttırarak sosyal sağlığın iyileşmesine de katkı sağlayabileceği düşünülmektedir.

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