

BÖLÜM 2

HAYVAN SAĞLIĞINDA MİKROBİYOTA VE İŞLEVİ

Nisa SİPAHİ¹
Cansu ÇELİK²
A.İlgın KEKEÇ³
Serkan İKİZ⁴

GİRİŞ

Geleneksel adıyla mikroflora, yeni ve güncel adıyla mikrobiyota, bir ortamda bulunan mikroorganizma topluluğunu tanımlamaktadır. Bu mikroorganizma topluluğu insanlarda olduğu gibi hayvanlarda da vücudun birçok sisteminde kolonize olarak konak ile birlikte canlılığını devam ettirmektedir. Bu kolonizasyon doğum ile başlamakta ve genetik ile çevresel faktörlerle beraber her bireye özgün olarak şekillenmektedir (1,2). Bağırsak mikrobiyotası ise konak bağırsağına kolonize olarak, konak ile birlikte yaşayan özel türlerin tamamını ifade etmektedir. Bunlar vücutta birçok fonksiyon üstlenen ve büyük bir bölümü kültür ortamında üretilmeyen mikroorganizmalardır. Yapılan araştırmalarda bağırsaklarda konak hücre sayısının yaklaşık 10 katı daha fazla mikrobiyal topluluğun olduğu bildirilmektedir. Özellikle de son yıllarda yapılan çalışmalarda insan ve hayvan sağlığı ile yakından ilişkilendirilmektedir (3).

Sağlıklı yapısında ihtiva ettiği filumlar arasında bir oran olduğu bilinen mikrobiyotanın kararlı durumunun bozulması disbiyozis olarak tanımlanmaktadır. Bu denge hayvanlarda türler arası farklılık göstermektedir. Ancak her türde mevcut bağırsak mikrobiyotasının bileşiminin, konağın bağışıklık sisteminde, metabolizmasında, hastalık ve sağlık oluşumlarında rol oynadığı düşünülmektedir (4,5,6). Örneğin germ free hayvanlarda yapılan çalışmalarda bağırsak mikrobiyotasının manipüle edilmesinin sinir sistemini etkileyerek davranış ve gen ekspresyon düzeylerinde değişikliklere neden olabileceği gösterilmiştir (7). Bu da hayvanlarda

¹ Öğr. Gör. Dr., Düzce Üniversitesi, Geleneksel ve Tamamlayıcı Tıp Uygulamalı ve Araştırma Merkezi sipahi.nisa@gmail.com

² Öğr. Gör. Dr. İstanbul Üniversitesi-Cerrahpaşa, Veterinerlik Meslek Yüksekokulu, Gıda İşleme Bölümü, Gıda Teknolojisi Programı, cansu.celik@iuc.edu.tr

³ Arş. Gör., İstanbul Üniversitesi-Cerrahpaşa Veteriner Fakültesi Mikrobiyoloji AD. ilginkecec@iuc.edu.tr

⁴ Prof. Dr., İstanbul Üniversitesi-Cerrahpaşa Veteriner Fakültesi Mikrobiyoloji AD. ser@istanbul.edu.tr

nın mevcut durumunun takibi, yem ve katkı maddelerinin kombinasyonu için oldukça önemlidir. Bu şekilde literatürdeki boşluğun doldurulması sağlanabileceği ve mikrobiyotanın, sinerjik ya da agonistik beslenme yaklaşımı ile modüle edilerek hayvan sağlığının korunabileceği öngörülmektedir.

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