

Bölüm 38

BAĞIŞIKLIK SİSTEMİNİ DESTEKLEYİCİ GIDALAR

Yasemin ERASLAN¹

GİRİŞ

İmmün sistemin gelişimi ve fonksiyon görmesi için gerekli enerji, makro ve mikro besin öğelerinin sağlanması açısından uygun beslenme önemli role sahiptir¹⁻³. Beslenme, enfeksiyon ve immü- nite arasında iki yönlü bir ilişki vardır³. Etkin bir immün sistem için hızlı hücresel proliferasyon ile düzenleyici ve koruyucu proteinlerin erken sente- zi anahtar role sahiptir. Bunun için substrat, ko- faktör ve yapısal elemanların hızlı temini gerekir. Dolayısıyla bir veya birden fazla esansiyel besin ögesi eksikliğine yol açan beslenme yetersizliği, immün sistem yanıtının hızını sınırlandırır ve enfeksiyonlara yatkınlık oluşturur. Benzer şekilde inflamasyon ve diğer immün yanıtlar; mineral se- kestrasyonu, emilim bozukluğu, besin öğelerinin artmış kaybı veya kullanımlarındaki değişiklik- lerle kişinin besin ihtiyacını değiştirip beslenme yetersizliğini derinleştirebilir^{4,5}.

Çocuklarda gelişen immün sistemin daha sa- vunmasız olması nedeniyle beslenme-immün sistem etkileşimleri özellikle önemlidir. Hayatın ilk dönemlerinde sistemik hümoral immünite transplasental immunglobulin (Ig) G'ye, spesifik mukozal immünite ise büyük ölçüde emzirme yo- luyla sağlanan Ig A'ya dayanır⁶⁻⁸. Serum Ig M ve Ig G konsantrasyonları dört-altı yaşa kadar eriş- kin konsantrasyonlarına ulaşmaz⁹. Timus ve diğer immün sistem dokuları puberte boyunca büyüme ve gelişmeye devam eder. Dolayısıyla normal im- mün durum ve yanıt tanımı çocuğun yaşına ve ge-

lişimine göre değişir. Prematürite, düşük doğum ağırlığı gibi etkenler bağışıklık sisteminin geliş- minin gecikmesine sebep olur⁴.

Herhangi bir besin maddesinin alımında ek- siklik varsa büyüme geriliği ve/veya diğer sistem fonksiyonlarında eksiklik görülür. Bağışıklık siste- mi de beslenme yetersizliklerinde fonksiyonu et- kilenen sistemlerdendir^{3,4}. İmmün fonksiyonlarda görülen bozuklukların derecesi ve geri dönebilir olup olmadığı; beslenme yetersizliğinin zamanına, süresine, ciddiyetine ve tipine bağlıdır. Erken dö- nemde görülen veya ağır besin ögesi eksiklikleri- nin bağışıklık sistemi üzerinde uzun süren etkileri olmaktadır. Malnutrisyon öyküsü olan çocuklar- da beslenme desteği sonrası bile immün yanıtta azalma tamamen düzelmeyebilir. Hayvan çalışma- ları erken büyüme dönemindeki özellikle intrauterin ve süttten kesilmeden önceki dönemdeki ağır besin ögesi eksikliklerinin hayat boyu süren hatta nesiller arası aktarılan bağışıklık yetmezliklerine yol açabileceğini göstermiştir¹⁰. Yapılan bir fare çalışmasında, prenatal dönemdeki çinko eksikli- ğinde ortaya çıkan immün yetmezliğin ikinci ve üçüncü nesillere aktarıldığı görülmüştür¹¹.

Nutrisyonel durum immün sistemi farklı dere- celerde etkiler. Bazı mikro besin öğelerinin subk- linik veya klinik eksiklikleri dolaşımdaki anahtar immün sistem hücrelerin ve proteinlerin mikta- rını ve fonksiyonel kapasitelerini azaltır. Esansi- yel yağ asitleri, folat, çinko, A vitamini gibi diğer mikro besin ögesi eksikleri mukozal lezyonlara yol

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biridir. Bir çocuğun immün sisteminin düzgün gelişmesi ve fonksiyonu için yeterli beslenme gereklidir. İnfantların beslenmesi için en iyisi anne sütüdür çünkü anne sütü gelişmekte olan immün sistemi koruyan ve gelişimini uyarıcı benzersiz bileşenlere sahiptir. Daha büyük çocuklarda ağır mikro besin öğelerinin eksiklikleri dışında immün fonksiyonlar genelde korunmaktadır. Beslenmesi iyi olan çocuklarda immün fonksiyonları uyarıcı için yüksek doz besin öğesi takviyelerinin veya diğer diyet bileşenlerinin kullanımı tartışmalıdır. Ancak mevcut klinik bilgiler, özellikle eksikliği görülen çocuklarda gıda takviyelerinin enfeksiyonların süresini ve ciddiyetini azaltabileceğini düşündürmektedir. Sonuç olarak immün sistemin olgunlaşmasının ve fonksiyonunun değişen besin öğesi gereksinimiyle olan ilişkisini anlamak için daha fazla çalışmaya ihtiyaç vardır.

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