Bölüm
16

ENDOKRİN BOZUCULAR

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GİRİŞ

Sentetik kimyasallar, özellikle son yarım yüzyılda hayatımızın her dakikasında gereklilik duyduğumuz, kaçınılmaz ürünlerin başında yer almaktadırlar. Bu ürünlerin çoğu günlük hayat konforumuzu artırmak, toplumsal ihtiyaçları sağlamak (yangın söndürücüler, alev geciktiriciler vb.) ya da modern yaşamı kolaylaştırmak (besinlerdeki koruyucular, plastik maddeler) amacıyla birçok alanda kullanılmaktadır. Fetal yaşamdan başlayan bir etkilenme süreciyle beraber yaşam sonuna kadar yaş ve cinsiyet ayırt etmeksizin her şekilde karşımıza çıkmaktadırlar. Etki mekanizması, endokrin organlar ve dolayısıyla hormonlar üzerinden olduğundan bu maddeler endokrin bozucular olarak da adlandırılmaktadırlar[1]. Maddenin türüne bağlı olarak; gıda, içme suyu, hava, toprak, ev malzemeleri, tüketici malzemeleri, ilaçlar vb. yollar ile maruziyet yaşanabilmektedir. Çocuk yaş grubu özellikle plasental geçiş nedeniyle yeni doğan döneminden başlayıp, sonrasında beslenme sırasında kullanılan aparatlar ve bakım malzemeleriyle, ilerleyen aylarda kirlenmiş toz-toprak ile, oral fazın aktif döneminde nesneleri sık ağza götürme vb. nedenlerle endokrin bozuculara sıkça maruz kalmaktadır.

Endokrin bozucular; hipotalamohipofizer -gonad/tiroid/adrenal bez akslarını etkileyerek, endokrin sistem işleyişini sentez, sekresyon, transport, reaksiyonlar, aktivasyon dönemi, vücuttan atılma evresi, hedef organ etkileri vb. birçok farklı basamakta bozabilen ekzojen madde veya madde karışımlarıdırlar[2]. Etkileri yıkıcı ve uzun süreli olup hayat konforunu bozacak seviyelere ulaşabilmektedir. Yıllar içerisinde yapılan çalışmalar; bu bileşiklerin nükleer reseptörler, steroid hormon reseptörleri, steroid olmayan hormon reseptörleri (norepinefrin, dopamin, serotonin) ve nörotransmitter reseptörleri üzerine yaptığı etkiler üzerine yoğunlaşmıştır[3].

Fetal dönemden başlayan bu maruziyet gen metilasyonlarını tetikleyerek gerek çocukluk dönemi, gerekse de ileri yaşamda devam edecek olan bir genetik değişime ve soydan soya aktarılan bir patolojiye neden olmaktadır[4]. Yaşadığımız yüzyılın kaçınılmaz ürünleri olan bu bileşiklerin sınıflamasına ve organlar ve metabolizma üzerine etkilerini güncel bilgiler ışığında göz atalım.

SINIFLAMA

A) Doğal endokrin bozucular: Östrojen reseptörlerine bağlanan ve onları uyaran doğal olarak oluşan non-steroidal bileşiklerdir. Gerek yarı ömürlerinin kısa olması gerekse de dokularda birikme özelliği olmaması ve vücuttan kolayca atılmaları nedeniyle yan etkileri önemli düzeyde olmayan grubu oluşturmaktadırlar[5]. Fitoöstrojenler olarak da adlandırılırlar. Vücudumuzda sentezlenen östrojene oranla daha zayıf etkili olup düşük dozlarda etkileri yok denecek kadar azdır. Günlük hayatımızda elma, kiraz, soya fasulyesi, maydanoz, havuç, patates, hububat vb. besinlerin içerisinde

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