26. BÖLÜM

TÜTÜN VE ÇOCUK GÖĞÜS HASTALIKLARI

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Giriş

Akciğerlerin gelişimi, intrauterin dönemde embriyogenez ile başlayıp çocukluk döneminde de devam etmektedir (1,2). Doğumdan sonra akciğer gelişiminin büyük bölümü ilk iki yıl içerisinde olmakla birlikte, alveollerin gelişim sürecinin 15 yaş sonrasına kadar devam ettiği bilinmektedir (3). İntrauterin dönemde ve doğum sonrası, tütün dumanı ve nikotine maruz kalmanın akciğerlerin gelişimini olumsuz etkilediği, alt solunum yolu enfeksiyonu gelişme riskini artırdığı, vizing (hışıltı) sıklığını artırdığı ve kronik akciğer hastalığı olan çocuklarda solunum semptomlarını tetiklediği gösterilmiştir (4-8).

Tütün dumanı, sağlık için zararlı etkileri olan 4000'den fazla kimyasal madde içermektedir (9). Özellikle nikotin, karbonmonoksit, akrolein, polisiklik aromatik hidrokarbonlar, aromatik aminler ve N-nitrozaminler gibi karsinojenler, fetal yaşamda ve doğum sonrası organların hızlı gelişme döneminde akciğerlerde ve beyinde olumsuz etkilere yol açabilmektedir (4). Tütün dumanındaki birincil bağımlılık yapan madde olan nikotinin plasentayı geçtiğine dair görüşler, gebelerde amniyon sıvısında ve yenidoğan bebeklerde kanda saptanan yüksek kotinin düzeyleri ile kanıtlanmıştır (10,11). Nikotin ayrıca sigara içen annelerde anne sütünde de gösterilmiştir (12). Anneden indirek tütün dumanı maruziyeti yanında, çocuklar doğum sonrası dönemden başlayıp tüm yaşamları boyunca sekonder (ikincil) tütün dumanına veya üçüncül tütün dumanına da maruz kalabilirler. Bu durum çevresel tütün dumanı maruziyeti olarak tanımlanmaktadır. İkincil duman, sigara içenlerin dışarı verdikleri ana duman ve yanan sigaradan çevreye yayılan dumanın bir karışımıdır. Son zamanlarda tanımlanan, üçüncül duman maruziyeti, özellikle iç ortamlarda, tütün dumanı ve nikotin maruziyeti olarak kabul edilmektedir. Üçüncül duman maruziyeti, tütün dumanı bileşenleri yüzeylerde biriktiğinde ortaya çıkar ve bu kimyasallar tozlara yapışarak havaya yeniden yayılabilir veya ortamdaki diğer kimyasallarla reaksiyona girebilir (13). Bunun sonucunda gelişen oksidasyona bağlı, üçüncül duman maruziyeti ikincil duman maruziyetine kıyasla daha fazla toksisiteye neden olabilir. Ayrıca, bebekler ve küçük çocuklar iç ortamlarda daha fazla zaman geçirmeleri, solunum hızlarının yüksek olması, ellerini daha sık ağızlarına götürmeleri nedeniyle büyük çocuklara göre ikincil ve üçüncül duman maruziyetine bağlı daha yüksek risk altındadırlar. Dünyada çocukların %40-50'sinin ikincil tütün dumanına maruz kaldığı ve özellikle de bu maruziyetin anne, baba ve diğer ev içi aile bireylerine bağlı olduğu bilinmektedir.

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Sonuç

Çocuklarda tütün dumanına intrauterin dönemde ve doğumdan sonra maruziyetin uzun dönemli etkilerini değerlendirmek için yeni çalışmalara ihtiyaç bulunmaktadır, ancak özellikle intrauterin tütün dumanı maruziyetinin akciğer gelişimini olumsuz etkilediği, epigenetik faktörler ve genetik polimorfizmlerin akciğer hastalığı gelişmesi için risk faktörü olacağı akılda tutulmalıdır. Tüm bunlara ek olarak özellikle ergenlik döneminde artan elektronik sigara kullanımı nedeniyle, elektronik sigaraların akciğer gelişimi ve solunum fonksiyonlarına etkisinin değerlendirilmesi için uzun süreli araştırmalara ihtiyaç bulunmaktadır.

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