BÖLÜM 10

HAVA KİRLİLİĞİ VE BİLİŞSEL GERİLEME BOZUKLUKLARI

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GİRİŞ

Hava kirliliği, tüm dünyada meydana gelen insan kaynaklı çevre felaketlerinden biridir. İnsanlara veya diğer canlı organizmalara zarara neden olabilecek çeşitli kimyasal, biyolojik malzeme karışımının varlığını toplu olarak tanımlar. Hem gelişmiş hem de gelişmekte olan ülkelerde küresel bir halk sağlığı sorunu olarak kabul edilmektedir. Dünya çapında milyonlarca insan, yasal güvenlik standartlarının çok üzerinde konsantrasyonlarda hava kaynaklı kirleticilere kronik olarak maruz kalmaktadır (1). Hava kirliliğine uzun süre maruz kalma, hem kardiyopulmoner hem de akciğer kanseri ölüm riskinin artmasıyla ilişkilendirilmiştir (2,3,4). Ayrıca, yanma emisyonları ve bunların ortamdaki partikül, yarı uçucu ve gaz halindeki hava kirleticilerine katkılarının tümü, mutajenite ve genetik hasara neden olan organik bileşikler içerir (5). Aslında, hava kirleticileri plasenta bariyerini geçebilir ve embriyo ve fetüsü doğrudan etkileyebilir (6,7). Bu zararlı etkilerin, trafiğin ana kaynağı olduğu ortam havasındaki partikül maddeden (PM) kaynaklandığı düşünülmektedir. Yanma emisyonları, ince parçacıklı hava kirliliğinin yarısından fazlasını ve birincil parçacıklı organik maddelerin çoğunu oluşturur. Ortamdaki partiküller boyut ve aerodinamik özelliklerle karakterize edilir: aerodinamik çapı 2,5 ila 10 μm (PM_{10}) olan kaba partiküller, 2,5 μm'den

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