Bölüm
6

AKCİĞER KANSERLERİNDE PET/BT'NİN YERİ

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GİRİŞ

Akciğer kanseri dünya genelinde en sık görülen kanser olup kansere bağlı ölüm nedenlerinin başında yer almaktadır (1). Mortalitenin yüksek olması nedeniyle erken tanı ve doğru evreleme, tedavi yönetiminde oldukça önem arz etmektedir. Akciğer kanserlerine yaklaşımda, tümör-lenf nodu-uzak metastaz (TNM) evrelemesi kulanılmakta olup Evre 1A da 5 yıllık sağ kalım %73 iken, Evre 4'te %13'e düşmektedir (2,3).

Pozitron emisyon tomografi/bilgisayarlı tomografide (PET/BT) en sık kullanılan radyofarmasötik bir glikoz analoğu olan flor-18 (F-18) ile işaretli fluoro-2-deoksi-D-glikoz (FDG) olup metabolik görüntüleme amacıyla kullanılmaktadır. FDG hücre içine glikoz membran taşıyıcı proteinler ile kolaylaştırılmış difüzyonla alınıp heksokinaz enzimi ile FDG-6-fosfata dönüştürülür. FDG-6-P katabolize edilemediğinden tümör hücrelerinde artan metabolizma ve glikolizise paralel olarak hücre içinde birikir. FDG-6-fosfattan yayılan pozitronların oluşturduğu anhilasyon fotonları PET dedektörlerinde tespit edilip üç boyutlu görüntüye dönüştürülürler.

Görsel değerlendirmenin yanı sıra, birim alandaki radyoaktivite konsantrasyonunun enjekte edilen doza ve hastanın vücut ağırlığına normalize edilmesiyle hesaplanan maksimum standart uptake değeri (SUVmax) sayısal değerlendirmede kullanılır. FDG-PET/BT akciğer nodüllerinin değerlendirilmesinde, akciğer kanserinin evrelemesinde, radyoterapi planlamada, nüks araştırmada ve tedaviye yanıtın değerlendirilmesinde klinikte rutin olarak kullanılmaktadır (4,5).

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