

RADYOTERAPİ İLİŞKİLİ KARDİYOTOKSİSİTE YÖNETİMİ

13.

BÖLÜM

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GİRİŞ

Kalp toraks içinde yer alan, vücuda kan pompalayan, düz kas yapısına sahip, içinden büyük damarların geçtiği ayrıca kendine ait vasküler yapıları barındıran bir organdır. Yerleşimi ve fonksiyonu göz önüne alındığında onkolojik tedavilere bağlı oluşabilecek yan etkiler muhtemeldir.

Radyoterapinin onkolojik hastalıklarda kullanılmaya başlandığı ilk dönemlerde büyük damarlar ve kalbin radyasyona dirençli olduğu düşünülmüş. Ancak zaman içinde yapılan çalışmalar doğrultusunda yüksek dozda verilen radyasyonun kardiak hasara neden olduğu anlaşılmıştır (1). Kalbe yakın yerleşimli tümörler nedeniyle yapılan ışınlamalar sonrasında kalpte görülen hasar klinik çalışmalar ile kanıtlanmış ve bu duruma “Radiation induced heart disease: Radyasyonun tetiklediği kalp hastalığı” adı verilmiştir (2).

Radyasyon kalp dokusu üzerinde mikrovasküler, makrovasküler ve endotelial hasar, ateroskleroz, fibrozis, valvuler disfonksiyon, fibrozis, perikardial hastalığa neden olabilir. Akut myokardit tablosu içinde kalp yetmezliği ve sol ventrikül hastalıkları görülmekle beraber, daha sık olarak uzun vadede fibrozis nedeni ile restriktif kardiyomyopati ve ventrikül disfonksiyonu izlenmektedir (3).

Günümüzde gelişen radyoterapi teknikleri ile bu hasar minimize edilmektedir. Multidisipliner yaklaşımla hastalar tedavileri sonrası hem onkologları hem de kardiyoloji hekimleri tarafından izlenerek yan etkiler konusunda daha yakın takip edilmektedirler.

Bu bölümde terapötik amaçla kullanılan radyasyonun kalp dokusu üzerinde meydana getirdiği etkiler, bunları en aza indirmek için farklı kanser türlerinde klinik ve teknik olarak nasıl önlemler alınabileceği, radyoterapi sonrasında uygulanacak izlem politikası konusunda bilgiler verilecektir.

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Tablo 3: RTOG/EORTC Late Radiation Morbidity Skorlaması

Grade I	Asemptomatik ya da hafif semptomlar, T dalgasında inversiyon, ST değişiklikleri, istirahat halinde >110 taşikardi.
Grade II	Eforla gelen orta düzeyde anjina, hafif düzeyde perikardit, normal kalp volümü, sebat eden ST ve T dalga anomalileri, kısa QRS.
Grade III	Şiddetli anjina, perikardial efüzyon, konstrüktif perikardit, hafif kalp yetmezliği, kardiyak genişleme, EKG anomalileri.
Grade IV	Tamponad, ileri düzey kalp yetmezliği, ileri düzey konstrüktif perikardit.

SONUÇ

Kalbe yakın organ ve dokuların ışınlandığı tedavilerde kardiyak toksisite riski mevcuttur. Hücresel düzeyde başlayan değişiklikler zaman içinde kalbin farklı bölümlerinde hasara neden olabilir. Klinikte radyoterapi alacak hastalar tedavi öncesinde kardiyak riskler açısından iyi değerlendirilmeli, gerekirse yaşam tarzlarında değişiklikler önerilmelidir. Teknik olarak ise kalp ve diğer normal dokuları koruyacak gelişmiş radyoterapi planlamaları tercih edilmelidir. Her hasta tedavileri sonrasında onkolog ve kardiyolog iş birliği içinde uzun dönem takibe alınmalıdır.

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