

BÖLÜM 33

Radyoterapinin Vasküler Komplikasyonları ve Alınacak Önlemler



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GİRİŞ

İyonize radyasyon, günümüzde kanserli hastaların %50 ila %60'ını tedavi etmek için kullanılmaktadır (1). Radyoterapi, tedavinin erken döneminde vasküler hasara yol açması nedeniyle uzun yıllar boyunca vasküler morbidite ve mortalitenin ciddi bir nedeni olarak suçlanmıştır. Tüm kardiyak ve vasküler dokular radyasyondan potansiyel olarak etkilenirler. Ancak 1940'lardan önce kalp ve büyük damarlar nispeten radyasyona dirençli organlar olarak kabul edilmiştir (2).

Radyasyona maruz kalma sonrasında vasküler etkilenme literatürde ilk olarak 1944 yılında tanımlanmıştır. Sheehan tarafından yapılan bir çalışmada, radyasyona maruz kalmış 100-500 mikron arası küçük arterlerin duvarında görülen lezyonların lipid damlacıkları içeren makrofajlarla karakterize olduğu kaydedilmiştir (3).

Radyoterapiye bağlı vasküler hastalıklar radyoterapinin kanser tedavisinde kullanılmaya başlanıl-

ması ile ilk olarak 1950'lerde kullanılan ortovoltaj tedavi cihazları (daha yüksek radyasyon dozu) ve göğüse manto alan radyasyonu tekniklerinin yan etkisi olarak görülmüştür. Literatüre, 1959 yılında Thomas ve Forbus tarafından yapılan bir insan otopsi çalışması ile kaydedilmiştir. Bu çalışma ile torasik aorta duvarında radyasyon sebebiyle intima fibrin hiperplazisi ve mediada hiyalin nekrozu olduğu görülmüştür (4). 1950'lerde kullanılan bu teknikler, odaklanmış yüksek voltajlı radyasyon sağlayan modern mega voltaj jeneratörleri ve lineer hızlandırıcıların bulunması ile değiştirilmiştir. Yeni modern teknikler ile kalp ve büyük damarlar olmak üzere çevredeki dokulara daha az saçılma etkisi görülmektedir. Ancak günümüz kanser hastalarında, radyasyon tedavisinin modern formları kullanılmasına rağmen, ışınlanan alanın proksimalindeki vasküler dokularda etkilenmenin şiddeti konusunda hala endişeler vardır (2, 5).

Radyasyona bağlı koroner arter hastalığına ilişkin incelemeler ve vaka serileri bol olmakla birlik-

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Radyoterapiye bağlı iliak ve femoral venöz stenozun tedavisi zor olabilir. Bu nedenle tanıyı doğru koymak ve uygun tedavi yönetimini belirlemek önemlidir. Bacakta azalıp artan şişlik durumlarında hastaya flavonoid ve kalsiyum dobesilat gibi venotonik ve vasküloprotektif ilaçlar başlanabilir. Tromboz söz konusu ise antikoagülasyon için düşük molekül ağırlıklı heparin ve varfarin kullanılır. Eğer tromboz ilk 72 saatte saptanır ise hastaya trombolitik tedaviler faydalı olabilir. Antikoagülasyon ile geleneksel konservatif tedavi, altta yatan anatomik defekt nedeniyle etkili olmayabilir ve başarılı tedaviye rağmen semptomlar tekrarlayabilir. Diğer tedavi yöntemleri endovasküler girişim ve açık cerrahi seçenekleridir. Trombektomi veya cerrahi baypası içeren geleneksel cerrahi tedaviler, malign olmayan obstrüksiyonun ana tedavisini oluşturmaktadır. Endovasküler müdahale altta yatan tetikleyici venöz darlığın lokalizasyonunu ortaya çıkarma potansiyeli olan bir yöntemdir. Aynı zamanda farmakomekanik yöntemler ile kombine edildiği zaman pıhtı ekstraksiyonu için de etkili bir tedavi yöntemi olma özelliğine sahiptir (99). Yeni gelişen teknolojiler ile endovasküler farmakomekanik trombektomi, balon ya da stent yerleştirilmesi işlemi ile birlikte yapılabilir. Çevre dokularda fibrosis olması sebebi ile balon işleminin başarı şansı düşüktür, ancak radyasyon tedavisine bağlı iliak ve femoral ven stenozunda başarılı şekilde stent tedavisi yapıldığı literatürde kaydedilmiştir. Farmakomekanik trombektomi veya stent işleminin sonradan antikoagülan tedaviye devam edilir (96, 97, 99).

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