29. BÖLÜM

PEDİATRİK TÜMÖRLERDE BRAKİTERAPİ

Ebru ATASEVER AKKAŞ [1]

GİRİŞ

Tarihsel olarak radyoterapi, özellikle pediatrik tümörlerden sarkomlar, nöroblastom, retinoblastom (RB) ve beyin tümörleri tedavisinde önemli bir rol oynamıştır (1). Bununla birlikte, radyoterapi büyüme ve gelişme geriliği, kardiyak, pulmoner ve nörokognitif yan etkiler, infertilite ve sekonder malignensiler gibi önemli geç yan etkilerle ilişkilidir (2). Etkili kemoterapötik ajanların ve gelişmiş cerrahi tekniklerin ortaya çıkmasıyla, radyoterapinin çocukluk çağı kanserlerinde kullanımı son 20 yılda azalmıştır.

Eksternal ışın radyoterapisi (EBRT) radyoterapinin yaygın kullanılan formu olmasına rağmen, kombine EBRT ile veya tek başına brakiterapi kullanımı, beyin tümörleri, yumuşak doku kanserleri ve RB hastalarında 1980'lerin ortalarında sıklıkta artmıştır (3). Hodgkin lenfoma, nöroblastom ve wilms tümöründe olduğu gibi, geç yan etkileri azaltmak için, radyoterapi (RT) dozunu azaltmak için birçok çalışmalar yapılmıştır (4-6).

Brakiterapi genellikle, ameliyat öncesi veya ameliyat sonrası EBRT ile birlikte verilir ve EBRT'ye göre birçok avantajı vardır. Radyobiyolojik etkinliği, birkaç hafta yerine birkaç gün boyunca yüksek doz RT uygulanmasıyla arttırılır; keskin radyasyon doz gradyantı göz önüne alındığında normal dokuların daha iyi korunmasına izin verirken uyumlu bir şekilde tedaviyi sağlar. Normal organların korunması intraoperatif radyasyon terapisi (IORT) ile mümkündür ve radyobiyolojik bir bakış açısıyla, terapötik oran fraksiyon başına daha yüksek dozlarla iyileştirilir. Hastanede kalma süresi de brakiterapi tedavisinde azalır (7).

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nak sızıntısı, kolimatör saçılması, fotonükleer etkileşimlerle nötron üretimleri ve hasta içerisinde Compton saçılması ile açıklanabilir (15).

SONUÇ

Brakiterapi, çocukların tedavisinde bir seçenek olarak düşünülmelidir. Normal dokuyu korurken oldukça lokalize bir doz verme kabiliyetine sahiptir.

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