17. BÖLÜM

MERKEZİ SİNİR SİSTEMİ KANSERLERİNDE BRAKİTERAPİ

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GİRİŞ

Merkezi Sinir Sisteminin (MSS) en sık görülen tümörleri metastazlardır. Bununla birlikte yine insanda gelişen en agresif tümörlerden bazılarıda MSS'de görülmektedir. Bu sebepler, santral sinir sisteminde görülen tümörler üzerinde araştırmaların yoğun bir şekilde devam etmesini de beraberinde getirmiştir. Son yıllarda özellikle lokal ablatif tedaviler ile ilgili heyecan verici gelişmeler olsa da bilinen en eski lokal tedavi modalitesi olan brakiterapi (BRT), nispeten uygulama zorluklarına rağmen MSS'de de araştırılan ve uygulamalarının yapıldığı bir alandır. Bu bölümde, başlıca MSS de brakiterapi radyobiyolojisinden, radyofiziğinden, aplikasyon yöntemlerinden, metastazlara ve primer MSS tümörlerine yönelik klinik uygulamalardan, son olarak da paraspinal yerleşimli tümör uygulamalarından bahsedilecektir

MERKEZİ SİNİR SİSTEMİ BRAKİTERAPİSİNDE FİZİK VE RADYOBİYOLOJİ

Merkezi Sinir Sistemi brakiterapisinde çoğunlukla kullanılan radyoaktif ajanlar,yüksek enerjili ve yüksek aktiviteye sahip İridyum-192 ile daha düşük enerjili İyot-125 ve Sezyum-131 dir. Bu ajanların seçimi yapılırken geçici veya kalıcı uygulama kararı ve yöntem etkili olmaktadır.

Radyonüklid	Ortalama Enerji (MeV)	Yarılanma Ömrü (Gün)
İyot-125	0.028	60
İridyum-192	0.38	74
Sezyum-131	0.03	10

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SONUÇ

Özetle, spinal bölge tümörlerinde brakiterapi uygulamalarının yeri net değildir. Şu aşamada spinal bölge brakiterapisindeki bilgilerimiz kısıtlı olmasına rağmen görüntüleme, cerrahi ve girişimsel radyolojideki gelişmeler yeni brakiterapi aplikasyonlarına olanak vermekte ve bu alan araştırmaya açık bir alan olarak durmaktadır

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