

Bölüm 6

DIŞ HEKİMLİĞİNDE KEMİK İÇİ LEZYONLARIN ULTRASONOGRAFİ İLE GÖRÜNTÜLENMESİ

Aykağan COŞGUNARSLAN¹

GİRİŞ

Ultrasonografinin (USG) tarihi, 1880'de Paris'te Pierre Curie ve kardeşi Jacques Curie tarafından bazı kristallerde piezoelektrik etkinin keşfiyle başlamıştır (1). Takip eden yıllarda, ultrasonun ilk tıbbi uygulaması, beyin parçalarının yıkımı, kraniyotomilerin gerçekleştirilmesi ve romatoid artrit veya Meniere hastalığı olan hastaların tedavisi için tasarlanmıştır (2). Ancak, kafa derisini USG ile inceleyerek beyin tümörlerini ve ventriküler kaymayı bulmaya çalışan ve USG'yi diagnostik açıdan kullanan ilk kişi Viyana Üniversitesi'nde bir nörolog ve psikiyatrist olan Karl T. Dussik'ti (3).

Ultrason dalgası, bir yerden bir yere iletilmesi için bir ortama ihtiyaç duyan, uzunlamasına mekanik bir dalga formudur. Ultrason, yüksek frekansta elektrik darbesi kullanılarak titreşen piezoelektrik kristaller tarafından üretilir. Böylelikle, elektrik enerjisi mekanik enerjiye dönüştürülmüş olur. Tanısal ultrason, dar bir odak ışını üreten bir dönüştürücü kullanır. Işın dokudan yansır ve aynı dönüştürücüye geri gönderilir, bu ekolar görselleştirilip kaydedilebilen bir ekranda birleştirilir (4).

Birçok hastalık oral ve maksillofasiyal bölgelerde kendini gösterir ve tanılarında intraoral ve panoramik radyografi, USG, bilgisayarlı tomografi, konik ışınli bilgisayarlı tomografi (KIBT), manyetik rezonans görüntüleme ve pozitron emisyon tomografisi gibi nükleer tıp yöntemleri dahil olmak üzere çeşitli yöntemler uygulanabilir. Bu yöntemlerden USG, invaziv olmayan ve yumuşak doku ile ilgili hastalıkların tespiti için kullanımı kolay olmaktadır.

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