

BÖLÜM 62



Atrial Fibrilasyon ve Yapay Zeka (AI)

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GİRİŞ

Sağlığın korunması ve iyileştirilmesi büyük bir oranda kliniklerin dışında gerçekleşmektedir. Günümüzde, elektronik cihazlar ve uygulamalar gibi teknolojik gelişmeler hayatımızın tamamen içindedir. Bu imkânların sağlık konusunda da hayatımızı kolaylaştırması beklenmektedir. Mobil elektronik aletler, giyilebilir / taşınabilir sensörlü aksesuarlar, yazılım uygulamaları, sağlık ve hastalık göstergelerinin takibinde kullanılmaya ve sağlık hizmetinin şekillenmesinde rol oynamaya başlamıştır. Tüm bunlar, yapay zeka (AI) destekli uygulamaların gelişmesiyle hayatımıza dahil olmuştur. E-Sağlık uygulamaları, kardiyovasküler hastalıkların engellenmesi ve AF tanısında da dikkat çekmektedir. Fiziksel aktivite, vücut ağırlığı, kan basıncı, diyabet kontrolü, ilaç uyumu gibi AF ile ilişkili risk faktörlerinin kontrol ve takibinde e-Sağlık hizmetleri kullanılmaya başlanmıştır ve özellikle mobil uygulamalar hem ulaşılabilir hem de kullanıcılar tarafından kolayca kullanılabilir özelliktedir. Ayrıca tanısız olarak; ritmi algılayabilen ve EKG görüntüleyebilen cihazlar ile AF saptanabilir.

Özellikle asemptomatik, kısa süren paroksizmal AF ataklarının yakalanmasında ve erken tanıda bu cihazlar oldukça faydalı görünmektedir. Gelecekte hastane yatışlarında azalma, morbidite ve mortalitede azalma da potansiyel faydaları arasında olabilir. Sadece AF tanısının yanısıra, AF öngörme ve AF tedavisi aşamasında da AI modern tıpta önemli bir yere sahip olmaya hazırlanıyor.

YAPAY ZEKÂ (AI) NEDİR?

Yapay zekâ terimi ilk defa 1956 yılında Dartmouth Üniversitesinde kullanılmıştır. Bundan 6 yıl sonra da Turing tarafından “Makineler düşünebilir mi?” sorusu sorulmuştur. Bundan sonrasında ise çalışmalar insan zekâsı gibi çalışabilecek makineleri tasarlamak üzerine devam etmiştir. İnsan zekâsı deneyimlerinden öğrenir, analiz eder ve sonuçlarına göre yeni kurallar belirleyebilir. Henüz düşünebilen makineler yaratılamasa da, insan zekâsı gerektirecek problemleri çözen, yani düşünme taklidi (simülasyonu) yapan makineler üretilebilmiştir. Günümüzde kullanılan otomatik EKG yorumlamaları kod-

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Yapay zeka yöntemleri (makine öğrenimi ve yapay nöral networkler –derin öğrenme-) alanında uzman insanlara göre bazı görevleri çok daha doğru ve hızlı bir şekilde yerine getirebilirler,, Ancak, YZ bazlı sistemler gerçek hayatta kullanıldığından çoğunlukla başarısızlıkla sonuçlanmaktadır. Bu nedenle YZ geliştirme aşaması ve dışarıdan doğrulanması çok önemlidir. YZ, AF tanısını geliştirme ve AF'ye bağlı maliyeti azaltma potansiyeline sahiptir, ancak günümüz itibarıyla klinik kullanımdaki rolü kısıtlıdır.

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