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Bölüm

COVID-19 ENFEKSİYONUNA BAĞLI GELİŞEN KARDİYAK KOMPLİKASYONLAR VE YÖNETİMİ

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GİRİŞ

Kardiyak tutulum hafif miyokardiyal hasardan kardiyojenik şoka kadar geniş bir spektrumu oluşturur. COVID-19'un (Coronavirüs disease 2019) sebebi SARS COV-2 (Severe Acute Respiratory Syndrome Coronavirüs 2)'dir. Virüs hücrelere ACE 2 (Anjiotensin Converting Enzyme 2) reseptörü aracılığıyla girer. ACE 2 reseptörleri alveoller, kardiyak miyositler ve vasküler endotel hücrelerde daha yoğunlukta bulunur. (1) Bu sebeple en çok solunum, kalp ve dolaşım sistemi etkilenmektedir ve en ölümcül komplikasyonlar bu sistemlerden kaynaklanmaktadır.

Kardiyak hastalıklar, COVID-19 öncesi mevcut olup "Akut Alevlenme" gösterebilir veya kardiyak komplikasyon olarak COVID-19 seyri sırasında ortaya çıkabilir. Daha önceden kardiyak hastalıkları olan hastalarda COVID-19 seyri daha ciddi seyretmekte ve mortalite oranını artırmaktadır.

COVID-19 enfeksiyonu esnasında tedavi gerektiren kardiyak komplikasyonların tedavisi günlük pratiğimizde bazı farklılıklar gerektirir. Tedavide temel prensip olarak güncel kılavuzlara bağlı kalınmaktadır.

MİYOKARD HASARI PATOFİZYOLOJİSİ

COVID-19 hastalarında miyokard hasarının altında yatan mekanizmaların hepsi tam olarak aydınlatılamamakla beraber en muhtemel mekanizmalar tanımlanmaya çalışılmıştır. Bunlar:

- Sitokin Fırtınası: Proinflamatuvar durum sebebiyle artan serbest oksijen radikalleri endotel disfonksiyonuna neden olabilmektedir. (2, 3)
- Kardiyak dokuda makrofaj ve interstisyel hücrelere direk sitotoksik etki. (4)
- ACE 2'nin downregulasyonu: Kalpte antiinflamatuvar, anti-fibrozis, anti-oksidan, vazodilatasyon etkileriyle kalp koruyucu etkisi olan ACE2'nin down regulasyonu. (5, 6)
- Düşük Oksijen Seviyesi: hücre içi asidoz ve serbest oksijen radikallerinin oluşması hücre membranında tahribata neden olmaktadır. Hipoksi kalsiyum iyonlarının hücre içine daha fazla geçerek miyositlerde apoptoza neden olabilmektedir. (7)
- COVID-19 tedavisinde kullanılan ilaçların yan etkileri: aritmilere ve EKG değişikliklerine neden olabilmektedir.
- COVID-19 direk endotel hasarı: endotel hasarı koagülasyon artışıyla beraber tromboembolik olaylara sebep olabilmektedir. COVID-19 enfeksiyonu esnasında fibrinojen,

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ları nedeniyle kateterizasyona tercih edilebilir. Ayrıca BT ve MRI, kateterizasyonda elde ettiğimiz koroner anatomi ve patolojilere ek olarak pulmoner parankim ve damarları hakkında bize ek bilgiler vererek tedavide elimizi daha çok rahatlatmaktadır. (53)

Daha önceden mevcut hastalıklar hipertansiyon, koroner arter hastalığı (KAH), KY, hiperlipidemi, kronik obstrüktif akciğer hastalığı, pnömoni, kronik böbrek yetmezliği ve ileri yaşlı hastalarda kardiyak komplikasyonlar daha sık görülmekte. Daha önceden kardiyak hastalığı olması, troponin, C-reaktif protein, D-dimer yüksekliği, ejeksiyon fraksiyonu (EF) düşüklüğü, egzersiz intoleransı, artmış kalp hızı mortaliteyi artıran faktörlerdir ve ciddi kardiyovasküler komplikasyon ile ilişkilidir. (54)

Ciddi COVID-19 seyrinde sıkça karşılaştığımız böbrek yetmezliği altta yatan kardiyomiopatiyi daha da kötüleştirmekte ve radyolojik olarak X-ray incelemede görülen pulmoner vasküler konjesyon ve ödem dekompanse KY tanısını ve tedavisini geciktirebilmektedir.

COVID-19 tanısı olan semptomatik hastalarda eşlik eden kardiyovasküler hastalıklar en sık hipertansiyon sonra KAH ve konjestif KY'dir. (55, 56, 57, 58)

Kılavuzlarda (ESC, ISH, CCS, ACC/AHA/HFSA; HT Canada) hipertansiyon tanısıyla ACE-İ veya ARB kullanan hastaların tedavisinde genel olarak devam edilmesi gerektiği, KBY, hiperkalemi, hipotansiyon varsa kesilebileceği belirtilmiştir. (59, 60, 61, 62)

Bradikardi, QT uzaması tespit edildiğinde mevcut medikal tedavi gözden geçirilmeli ve tedavi tekrar düzenlenerek torsades de pointes engellenmelidir. (63)

Venöz ve arteriyel tromboemboli profilaksisinde hastaneye COVID-19 enfeksiyonu nedeniyle yatan ve kanama için yüksek riski bulunmayan her hastaya başlanması önerilmektedir. Böbrek yetmezliği yoksa pratik olması, doz ayarlanması gerektirmemesi ve laboratuvar testleriyle takibi-

ne gerek kalınmaması nedeniyle düşük molekül ağırlıklı heparin kullanımı önerilmektedir.

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