BÖLÜM

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Ventilatör Teknolojisi ve Yönetimi

Adebayo Esan, MBBS, FCCP, FACP; Felix Khusid RRT- ACCS, NPS, RPFT, FAARC, FCCM, FCCP and Suhail Raoof, MD, FCCP, MACP, CCM
Çeviri: Uz. Dr. Zehra Mermi Bal, Prof. Dr. Ali Necati Gökmen

ÖNEMLİ NOKTALAR

1. Mekanik ventilasyonun hedefleri güvenli gaz değişimini sağlamak, solunum işini azaltmak, hasta-mekanik ventilatör uyumunu artırmak, iyatrojenik hasarı en aza indirmek ve zamanında mekanik ventilatörden ayrılmayı sağlamaktır.
2. Mekanik ventilasyon, hipoksi, hiperkarbi ya da her ikisinin sonucunda normal gaz değişimini idame edemeyen, hava yolu problemleri olan ya da genel anestezi alan hastalarda endikedir.
3. Kontrol değişkeni, soluk sekansı ve hedefleme şemasının belirlenmesi ile bir ventilatör modu sınıflandırılabilir.
4. Solunum desteğinin konvansiyonel modları devamlı zorunlu ventilasyon, asiste kontrollü ventilasyon, aralıklı zorunlu ventilasyon, senkronize aralıklı zorunlu ventilasyon ve basınç destekli ventilasyondur.
5. Solunum desteğinin alternatif modları volüm garantili basınç destekli ya da basınç arttırma, değişken basınç destekli ventilasyon, basınç ayarlı volüm kontrollü ventilasyon ve otomod ventilasyon gibi dual kontrol modlarını içerir.
6. Solunum desteğinin alternatif olmayan modları ise hava yolu basınç salınımlı ventilasyon, orantılı yardımcı ventilasyon, ayarlı destek ventilasyon, nöral olarak ayarlanmış ventilasyon desteği ve yüksek frekanslı ossillatuvar ventilasyon ile yüksek frekanslı perküsif ventilasyonu içeren yüksek frekanslı ventilasyondur.
7. Mekanik ventilasyon süresince peak ve plato basınçları, intrinsik ekspiryum sonu pozitif basınç ve solunum işi monitörize edilir.
8. Solunum yetersizliği yaratan durumların tamamen ya da kısmen düzelmesi halinde spontan solunum denemelerinin yapılması için ön koşullar; düşük PEEP ile yeterli oksijenasyon, $PaO_2/FiO_2 > 200$, PEEP ≤8 cm H_2O ve FiO_2 ≤0,5, ciddi asidoz olmamalı (pH ≥ 7,25), vazopressör desteği olmadan ya da minimal destek ile hemodinamik stabilitenin sağlanması ve spontan solunum çabasının olmasıdır.
9. Noninvaziv pozitif basınçlı ventilasyon invaziv ventilasyonun komplikasyonlarını önler. (travma, kardiyak aritmiler, hipotansiyon, volütravma ve ventilatör ilişkili pnömoni).
10. Noninvaziv ventilasyon için endikasyonlar kronik obstruktif akciğer hastalığında (KOAH) akut hiperkapnik solunum yetersizliği, kardiyojenik pulmoner ödem ve immünsuprese hastalarda pulmoner infiltrasyonlar, ateş ve akut solunum yetersizliğidir.

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