



BÖLÜM 9

Akut Solunum Sıkıntısı Sendromu

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Giriş

Akut solunum sıkıntısı sendromu (ARDS), pulmoner veya sistemik kaynaklı olabilen, inflamatuar bir süreçte sekonder olarak gelişen alveolar hasar nedeniyle hipoksemi ve nefes darlığına yol açan, kardiyojenik olmayan pulmoner ödem şeklidir.

ARDS ilk olarak 1967'de Ashbaugh ve arkadaşları tarafından tanımlanmıştır (1). 1994 yılında yayınlanan Amerikan Avrupa Mutabakat Konferansı (AECC) tanımı, klinisyenler tarafından geniş çapta benimsenmiş ve yaygın olarak uzun süre kullanılmıştır (2). 18 yıllık uygulamalı araştırmalar sonrasında bu kriterlerin yetersizliğini gözlemlenmiş ve yerini 2012 yılında yayınlanan Berlin tanımına bırakmıştır (3). Berlin tanımı 4 kategoriden oluşmaktadır (Tablo 1).

Tablo 1. ARDS'nın Berlin Tanımı

Akut solunum sıkıntısı sendromu (ARDS)

Zamanlama: 1 hafta içinde ortaya çıkan yeni veya kötüleşen solunum semptomları,

Akciğer görüntülemesi: Efüzyon, kollabs ve nodül ile açıklanamayan bilateral opasite,

Ödem kaynağı: Solunum sıkıntısı kalp yetmezliği veya aşırı sıvı yüklenmesi ile tam olarak açıklanamıyor. Herhangi risk faktörü yoksa hidrostatik ödemi dışlamak için objektif bir değerlendirmeye (örn. Ekokardiyografi) ihtiyaç var

Oksijenizasyon:

- Hafif: $200 \text{ mmHg} < \text{PaO}_2/\text{FiO}_2 \leq 300 \text{ mm Hg}$ + PEEP veya CPAP $\geq 5 \text{ cm H}_2\text{O}$
- Orta: $100 \text{ mm Hg} < \text{PaO}_2/\text{FiO}_2 \leq 200 \text{ mm Hg}$ + PEEP $\geq 5 \text{ cm H}_2\text{O}$
- Ağır: $\text{PaO}_2/\text{FiO}_2 \leq 100 \text{ mm Hg}$ + PEEP $\geq 5 \text{ cm H}_2\text{O}$

Kısaltmalar: CPAP, sürekli pozitif hava yolu basıncı; FiO_2 , inspiryum havasındaki fraksiyonel oksijen; PaO_2 , arteriyel parsiyel oksijen basıncı; PEEP, ekspirasyon sonu pozitif basınç

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KAYNAKLAR

1. Ashbaugh D, Bigelow DB, Petty T, et al. Acute respiratory distress in adults. *The Lancet*. 1967;290(7511):319-23.
2. Bernard GR, Artigas A, Brigham KL, et al. The American-European Consensus Conference on ARDS. Definitions, mechanisms, relevant outcomes, and clinical trial coordination. *Am J Respir Crit Care Med*. 1994;149(3 Pt 1):818-24.
3. Force ADT, Ranieri V, Rubenfeld G, et al. Acute respiratory distress syndrome. *Jama*. 2012;307(23):2526-33.
4. Riviello ED, Kiviri W, Twagirumugabe T, et al. Hospital incidence and outcomes of the acute respiratory distress syndrome using the Kigali modification of the Berlin definition. *American journal of respiratory and critical care medicine*. 2016;193(1):52-9.
5. Bellani G, Laffey JG, Pham T, et al. Epidemiology, patterns of care, and mortality for patients with acute respiratory distress syndrome in intensive care units in 50 countries. *Jama*. 2016;315(8):788-800.
6. Villar J, Blanco J, Kacmarek RM. Current incidence and outcome of the acute respiratory distress syndrome. *Current opinion in critical care*. 2016;22(1):1-6.
7. Rezoagli E, Fumagalli R, Bellani G. Definition and epidemiology of acute respiratory distress syndrome. *Annals of translational medicine*. 2017;5(14).
8. Matthay MA, Zemans RL, Zimmerman GA, et al. Acute respiratory distress syndrome. *Nature reviews Disease primers*. 2019;5(1):1-22.
9. Meyer NJ, Christie JD, editors. Genetic heterogeneity and risk of acute respiratory distress syndrome. *Seminars in respiratory and critical care medicine*; 2013: Thieme Medical Publishers.
10. Mac Sweeney R, McAuley DF. Acute respiratory distress syndrome. *The Lancet*. 2016;388(10058):2416-30.
11. Huppert LA, Matthay MA, Ware LB. Pathogenesis of acute respiratory distress syndrome. *Seminars in respiratory and critical care medicine*; 2019: NIH Public Access.
12. Thompson BT, Chambers RC, Liu KD. Acute respiratory distress syndrome. *New England Journal of Medicine*. 2017;377(6):562-72.
13. Saguil A, Fargo MV. Acute respiratory distress syndrome: diagnosis and management. *American family physician*. 2020;101(12):730-8.
14. García-Laorden MI, Lorente JA, Flores C, et al. Biomarkers for the acute respiratory distress syndrome: how to make the diagnosis more precise. *Ann Transl Med*. 2017;5(14):283.
15. Sheard S, Rao P, Devaraj A. Imaging of acute respiratory distress syndrome. *Respiratory care*. 2012;57(4):607-12.
16. Gattinoni L, Caironi P, Pelosi P, et al. What has computed tomography taught us about the acute respiratory distress syndrome? *American journal of respiratory and critical care medicine*. 2001;164(9):1701-11.
17. Bellani G, Laffey JG, Pham T, et al. Noninvasive ventilation of patients with acute respiratory distress syndrome. Insights from the LUNG SAFE study. *American journal of respiratory and critical care medicine*. 2017;195(1):67-77.
18. Frat JP, Thille AW, Mercat A, et al. High-flow oxygen through nasal cannula in acute hypoxic respiratory failure. *New England Journal of Medicine*. 2015;372(23):2185-96.

19. The A. Network Ventilation with lower tidal volumes as compared with traditional tidal volumes for acute lung injury and the acute respiratory distress syndrome. *N Engl J Med.* 2000;342:1301-8.
20. Papazian L, Aubron C, Brochard L, et al. Formal guidelines: management of acute respiratory distress syndrome. *Annals of intensive care.* 2019;9(1):69.
21. Siegel MD, Hyzy RC. Ventilator management strategies for adults with acute respiratory distress syndrome. *Wolters Kluwer;* 2021.
22. Martínez Ó, Nin N, Esteban A. Prone position for the treatment of acute respiratory distress syndrome: a review of current literature. *Archivos de Bronconeumología ((English Edition)).* 2009;45(6):291-6.
23. Munshi L, Del Sorbo L, Adhikari NK, et al. Prone position for acute respiratory distress syndrome. A systematic review and meta-analysis. *Annals of the American Thoracic Society.* 2017;14(Supplement 4):S280-S8.
24. Ferguson ND, Cook DJ, Guyatt GH, et al. High-frequency oscillation in early acute respiratory distress syndrome. *New England Journal of Medicine.* 2013;368(9):795-805.
25. Young D, Lamb SE, Shah S, et al. High-frequency oscillation for acute respiratory distress syndrome. *New England Journal of Medicine.* 2013;368(9):806-13.
26. Papazian L, Forel J-M, Gacouin A, et al. Neuromuscular blockers in early acute respiratory distress syndrome. *New England Journal of Medicine.* 2010;363(12):1107-16.
27. Spieth P, Güldner A, de Abreu MG. Akutes Lungenversagen. *Der Anaesthetist.* 2017;66(7):539-52.
28. Griffiths MJ, Evans TW. Inhaled nitric oxide therapy in adults. *New England Journal of Medicine.* 2005;353(25):2683-95.
29. National Heart, Lung, and Blood Institute Acute Respiratory Distress Syndrome (ARDS) Clinical Trials Network. Efficacy and safety of corticosteroids for persistent acute respiratory distress syndrome. *New England Journal of Medicine* 354.16 (2006): 1671-1684.
30. Baudouin SV. Surfactant medication for acute respiratory distress syndrome. *Thorax.* 1997;52(Suppl 3):S9.
31. Xiong B, Wang C, Tan J, et al. Statins for the prevention and treatment of acute lung injury and acute respiratory distress syndrome: A systematic review and meta-analysis. *Respirology.* 2016;21(6):1026-33.
32. Cutts S, Talboys R, Paspula C, et al. Adult respiratory distress syndrome. *The Annals of The Royal College of Surgeons of England.* 2017;99(1):12-6.