

D-Dimer Negatif Bilateral Masif Pulmoner Emboli

Hasan GÖKÇE¹

GİRİŞ

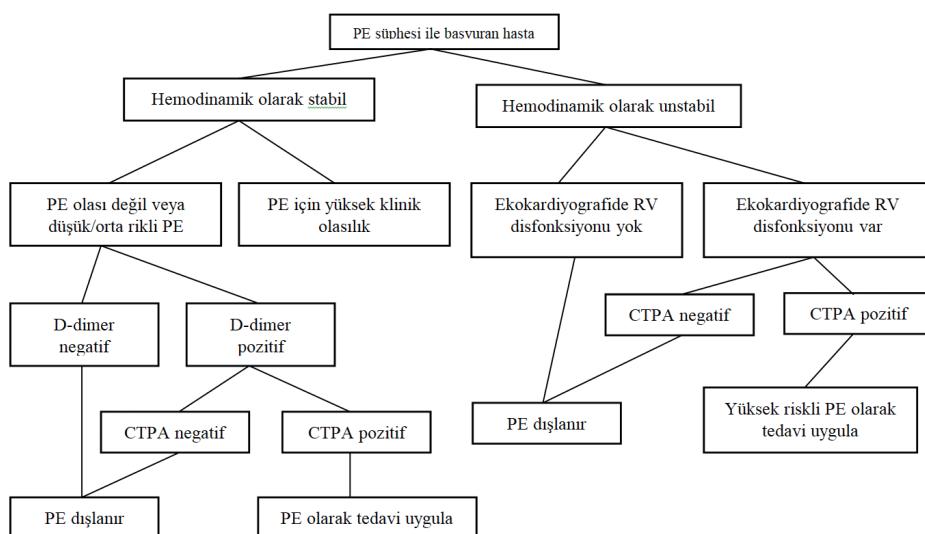
Akut pulmoner emboli (PE), venöz trombo emboli (VTE) 'nin, ani kardiyak ölümme dahi neden olabilen ve genellikle derin ven trombozu (DVT) kaynaklı en ciddi klinik tablosudur(1). Klinik prezentasyon, bazen yanlış tanı konmasına neden olan, diğer bazı durumların özelliklerini taklit eder(2).

PE risk faktörleri arasında obezite, immobilizasyon, sigara kullanımı, kanser, cerrahi, travma, gebelik, oral kontraseptifler veya hormon replasman tedavileri ve önceki PE veya bilinen bir pihtılaşma bozukluğu öyküsü bulunur. Buna rağmen hastaların %30'unda herhangi bir risk faktörünün olmadığı ve hastaların yaş ortalamasının 56-66 arasında olduğu saptanmıştır(1).

PE tanısında en sık kullanılan skorlama sistemi Wells Skorudur (Tablo 1). Bu skorlama belirti, bulgu ve olasılıklar dahilinde ilgili hekim tarafından puanlama yapılmasıyla elde edilir(3).

Avrupa kardiyoloji cemiyeti (ESC) 2014 kılavuzuna göre hemodinamik olarak stabil olan hastalarda ön değerlendirme skoruna göre plan yapılması önerilmektedir. PE olasılığı düşük ve orta riskli olan hastalarda D-dimer testi yapılması ve D-dimer sonuçları pozitif bulunursa BT anjiyografi çekilmesi önerilmektedir(4). D-dimer bir fibrin yıkım ürünüdür. D-dimer düzeyi; cerrahi, travma, enfeksiyon hastalıkları, böbrek patolojileri, sistemik lupus eritematozus ve covid-19 enfeksiyonu gibi birçok durumda yükselebilir. Bu sebeple D-dimerin pozi-

¹ Uzm. Dr., Malatya Eğitim ve Araştırma Hastanesi Acil Tıp Kliniği, drhasangokce@gmail.com



Şekil 1. Pulmoner emboli yönetim şeması (31)

KAYNAKLAR

1. Morrone, D., & Morrone, V. (2018). Acute pulmonary embolism: focus on the clinical picture. *Korean circulation journal*, 48(5), 365-381
2. Heit, J. A., Mohr, D. N., Silverstein, M. D. et al. (2000). Predictors of recurrence after deep vein thrombosis and pulmonary embolism: a population-based cohort study. *Archives of internal medicine*, 160(6), 761-768
3. Wells, P. S., Anderson, D. R., Rodger, M. et al. (2001). Excluding pulmonary embolism at the bedside without diagnostic imaging: management of patients with suspected pulmonary embolism presenting to the emergency department by using a simple clinical model and d-dimer. *Annals of internal medicine*, 135(2), 98-107.
4. Sade L.E. (2015). Acute Pulmonary Embolism Diagnosis and Treatment Guidelines (ESC 2014). Turk Kardiyol Dern Ars.; 43(1): 7-11
5. Wells PS, Brill-Edwards P, Stevens P, et al. A novel and rapid whole-blood assay for D-dimer in patients with clinically suspected deep vein thrombosis. *Circulation* 1995;91:2184-2187
6. Freyburger G, Trillaud H, Labrouche S, et al. D-dimer strategy in thrombosis exclusion -- a gold standard study in 100 patients suspected of deep venous thrombosis or pulmonary embolism: 8 DD methods compared. *Thromb Haemost* 1998;79:32-37
7. Brill-Edwards P, Lee A. D-dimer testing in the diagnosis of acute venous thromboembolism. *Thromb Haemost* 1999;82:688-694
8. Ekmekyapar M. COVID-19 algoritmalar. Öğütürk H, editör. Koronavirüs Hastalığı (COVID-19) ve Acil Tıp 2020. 1. baskı. Ankara: Türkiye Klinikleri; 2020. p:69-74.
9. Moore, A. J., Wachsmann, J., Chamathy, M. R., et al. (2018). Imaging of acute pulmonary embolism: an update. *Cardiovascular diagnosis and therapy*, 8(3), 225.
10. Beckman, M. G., Hooper, W. C., Critchley, S. E. et al. (2010). Venous thromboembolism: a public health concern. *American journal of preventive medicine*, 38(4), S495-S501.
11. Næss, I. A., Christiansen, S. C., Romundstad, P. et al.(2007). Incidence and mortality of venous thrombosis: a population-based study. *Journal of thrombosis and haemostasis*, 5(4), 692-699.
12. Tagalakis, V., Patenaude, V., Kahn, S. R. et al.(2013). Incidence of and mortality from venous thromboembolism in a real-world population: the Q-VTE Study Cohort. *The American journal of medicine*, 126(9), 832-e13.
13. LaporteS, M. (2008). Clinical predictors for fatal pulmonary embolism in 15 520 patients with venous thromboembolism findings from the registro informatizado de la enfermedad tromboembólica venosa (RIETE) registry. *Circulation*, 117(13), 1711.

14. Tzoran, I., Brenner, B., Papadakis, M. et al.(2014). VTE registry: what can be learned from RIETE?. *Rambam Maimonides medical journal*, 5(4).
15. Goldhaber, S. Z., Visani, L., & De Rosa, M. (1999). Acute pulmonary embolism: clinical outcomes in the International Cooperative Pulmonary Embolism Registry (ICOPER). *The Lancet*, 353(9162), 1386-1389.
16. Heit, J. A., Silverstein, M. D., Mohr, D. N. et al.(2000). Risk factors for deep vein thrombosis and pulmonary embolism: a population-based case-control study. *Archives of internal medicine*, 160(6), 809-815.
17. Yavuz, S., Toktas, F., Goncu, T. et al.(2014). Surgical embolectomy for acute massive pulmonary embolism. *International journal of clinical and experimental medicine*, 7(12), 5362.
18. Fukuda I, Daitoku K. (2017) Surgical embolectomy for acute pulmonary thromboembolism. Ann Vasc Dis; **10**: 107-14.
19. Jaff, M. R., McMurry, M. S., Archer, S. L. et al.(2011). Management of massive and submassive pulmonary embolism, iliofemoral deep vein thrombosis, and chronic thromboembolic pulmonary hypertension: a scientific statement from the American Heart Association. *Circulation*, 123(16), 1788-1830.
20. Thompson, B. T., & Kabrhel, C. Overview of acute pulmonary embolism in adults-*UpToDate (Internet)*. 2020 (cited 2020 jun 9).
21. Secemsky, E., Chang, Y., Jain, C. C. et al.(2018). Contemporary management and outcomes of patients with massive and submassive pulmonary embolism. *The American journal of medicine*, 131(12), 1506-1514.
22. Saxena, P., Smail, H., & McGiffin, D. C. (2016). Surgical techniques of pulmonary embolectomy for acute pulmonary embolism. *Operative Techniques in Thoracic and Cardiovascular Surgery*, 21(2), 80-88.
23. Zhan, Z. Q., Wang, C. Q., Nikus, K. C. et al.(2014). Electrocardiogram patterns during hemodynamic instability in patients with acute pulmonary embolism. *Annals of noninvasive electrocardiology*, 19(6), 543-551.
24. Righini M, Goehring C, Bounameaux H. et al.(2000) Effects of age on the performance of common diagnostic tests for pulmonary embolism, Am J Med, vol. 1095 pg. 357-361.
25. Eriten, S., & Sevimli, R. (2019). Investigation of the relationship between hospitalization periods in patients with acute coronary syndrome. *Annals of Medical Research*, 26(7), 1152-6.
26. Righini, M., Van Es, J., Den Exter. et al.(2014). Age-adjusted D-dimer cutoff levels to rule out pulmonary embolism: the ADJUST-PE study. *Jama*, 311(11), 1117-1124. DOI:10.1001/jama.2014.2135
27. Linkins, L. A., Bates, S. M., Lang, E. et al.(2013). Selective D-dimer testing for diagnosis of a first suspected episode of deep venous thrombosis: a randomized trial. *Annals of internal medicine*, 158(2), 93-100. doi:10.7326/0003-4819-158-2-201301150-00003
28. Konstantinides, S. V., Meyer, G. (2019). The 2019 ESC guidelines on the diagnosis and management of acute pulmonary embolism. DOI: 10.1093/eurheartj/ehz405
29. Schouten, H. J., Geersing, G. J., Koek, H. L. et al.(2013). Diagnostic accuracy of conventional or age adjusted D-dimer cut-off values in older patients with suspected venous thromboembolism: systematic review and meta-analysis. *Bmj*, 346, f2492. DOI: 10.1136/bmj.f2492
30. Worsley, D. F., Alavi, A., Aronchick, J. M. et al.(1993). Chest radiographic findings in patients with acute pulmonary embolism: observations from the PIOPED Study. *Radiology*, 189(1), 133-136.
31. Erythropoulou-Kaltsidou A., Alkagiet S., Tziomalos K. et al. (2020). WJC. World, 12(5), 161-230.
32. Licha, C. R. M., McCurdy, C. M., Maldonado, S. M. et al.(2020). Current Management of Acute Pulmonary Embolism. *Annals of Thoracic and Cardiovascular Surgery*, 26(2), 65.
33. Piazza, G., Hohlfelder, B., Jaff, M. R. et al.(2015). A prospective, single-arm, multicenter trial of ultrasound-facilitated, catheter-directed, low-dose fibrinolysis for acute massive and submassive pulmonary embolism: the SEATTLE II study. *JACC: Cardiovascular Interventions*, 8(10), 1382-1392.