Bölüm 13

GEBELİKTE DERİN VEN TROMBOZU VE PULMONER EMBOLİ

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GİRİŞ

Venöz tromboembolizm(VTE), gebeliğe bağlı maternal mortalite ve morbiditenin önemli bir nedenidir.(1,2) Gebelikte genel venöz tromboembolizm insidansı düşüktür. Yaklaşık 1000 gebeliğin 1-2'sinde teşhis edilir. Derin ven trombozu (DVT) ve pulmoner emboli (PE) toplu olarak VTE olarak anılır. Tromboz damar içinde kan akımını engelleyen bir pıhtı (trombüs) ile kısmen veya tamamen tıkalı olması durumudur. Eğer bu trombüs oluştuğu yerden ayrılıp başka bir damara yerleşirse buna emboli denir. Gebelikle ilişkili VTE vakalarının yaklaşık % 75–80'i DVT'den, % 20–25'i PE' den kaynaklanmaktadır.(3,4)

Gebelikte meydana gelen bazı fizyolojik ve anatomik değişikliklere (hiperkoagülabilite, venöz staz, venöz akımda azalma, büyüyen uterusun inferior vena cavaya basısı ,immobilite gibi) bağlı olarak gebe olmayan aynı yaştaki kadınlara göre yaklaşık 4-5 kat daha fazla görülmektedir.(5)

Gebelikte artmış VTE riskinin ana nedeni hiperkoagülabilitedir. Hiperkoagübilite doğum sırasında ve sonrasında maternal kanamayı engellemek için gereklidir. Ayrıca gebelikte, hemostazda rol oynayan koagülasyon faktör seviyeleri de değişir. Prokoagülan faktörlerden olan faktör VII, VIII, X, vWF ve fibrino-

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- Gebelikte tromboembolizm tedavisinin temel dayanağı antikoagülasyondur. Öncelikle düşük molekül ağırlıklı heparin tercih edilir, en az 3 ay ve doğumdan en az 6 hafta sonraya kadar devam etmelidir.

KAYNAKLAR

1. Hasegawa J, Sekizawa A, Tanaka H, et al. Maternal Death Exploratory Committee in Japan Japan Association of Obstetricians and Gynecologists. Current status of pregnancy-related maternal mortality in Japan: a report from the Maternal Death Exploratory Committee in Japan. BMJ Open 2016;359:e010304. doi:10.1136/bmjopen2015-010304 pmid:27000786.
2. Cantwell R, Clutton-Brock T, Cooper G, et al. Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer: 2006-2008. The Eighth Report of the Confidential Enquiries into Maternal Deaths in the United Kingdom. BJOG 2011;359(Suppl 1):1-203. doi:10.1111/j.1471-0528.2010.02847.x pmid:21356004.
3. James AH, Jamison MG, Brancazio LR, Myers ER.Venous thromboembolism during pregnancy and the postpartum period: incidence, risk factors, and mortality. Am J Obstet Gynecol 2006;194:1311–5.
4. ACOG Practice Bulletin No. 196. (2018). Obstetrics & Gynecology, 132(1), e1-e17. doi:10.1097/aog.0000000000002706
5. Sousa Gomes M, Guimaraes M, Montenegro N. Thrombolysis in pregnancy: a literature review. The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstet. 2018 Jan 29:1-331. doi: 10.1080/14767058.2018.1434141. PubMed PMID: 29378443; eng.
6. Bremme, K. A. (2003). Haemostatic changes in pregnancy. Best Practice & Research Clinical Haematology, 16(2), 153–168. doi:10.1016/s1521-6926(03)00021-5
7. James AH, Jamison MG, Brancazio LR, et al. Venous thromboembolism during pregnancy and the postpartum period: incidence, risk factors and mortality. Am J Obstet Gynecol 2006;194:1311
8. James AH, Tapson VF, Goldberg SZ. Thrombosis during pregnancy and the postpartum period. Am J Obstet Gynecol 2005;193:216-9.
9. Sultan AA, Tata LJ, West J, Fiaschi L, Fleming KM, Nelson-Piercy C, et al. Risk factors for first venous thromboembolism around pregnancy: a populationbased cohort study from the United Kingdom. Blood. 2013;121(19):3953-61
10. Chan WS, Spencer FA, Ginsberg JS. Anatomic distribution of deep vein thrombosis in pregnancy. CMAJ 2010;357:657-60. doi:10.1503/cmaj.091692 pmid:20351121
11. Chunilal, S., & Bennett, A. (2016). Diagnosis and Management of Deep Vein Thrombosis and Pulmonary Embolism in Pregnancy. Seminars in Thrombosis and Hemostasis, 42(07), 760–773. doi:10.1055/s-0036-1587684
12. James AH, Tapson VF, Goldhaber SZ. Thrombosis during pregnancy and the postpartum period. Am J Obstet Gynecol 2005;357:216-9. doi:10.1016/j.ajog.2004.11.037 pmid: 16021082.
13. Le Gal, G., Kercret, G., Ben Yahmed, K., Bressollette, L., Robert-Ebadi, H., … Riberdy, L. (2012). Diagnostic value of single complete compression ultrasonography in pregnant and postpartum women with suspected deep vein thrombosis: prospective study. BMJ, 344(apr24 2), e2635–e2635. doi:10.1136/bmj.e2635
14. Green-top Guideline No. 37b — thromboembolic disease in pregnancy and the puerperium: acute management. London: Royal College of Obstetricians and Gynaecologists, April 2015 (www.rcog.org.uk/globalassets/documents/guidelines/gtg-37b.pdf).

15. Devis, P., & Knuttinen, M. G. (2017). Deep venous thrombosis in pregnancy: incidence, pathogenesis and endovascular management. Cardiovascular Diagnosis and Therapy, 7(S3), S309–S319. doi:10.21037/cdt.2017.10.08
16. Kline, J. A. (2005). D-Dimer Concentrations in Normal Pregnancy: New Diagnostic Thresholds Are Needed. Clinical Chemistry, 51(5), 825–829. doi:10.1373/clinchem.2004.044883
17. Linhardt, R. J. (2016). Heparin and anticoagulation. Frontiers in Bioscience, 21(7), 1372–1392. doi:10.2741/4462
18. Greer IA. Pregnancy complicated by venous thrombosis. N Engl J Med 2015;357:540-7. doi:10.1056/NEJMcp1407434 pmid:26244307
19. Bates SM, Greer IA, Middeldorp S, et al. VTE, thrombophilia, antithrombotic therapy, and pregnancy: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. Chest. 2012 Feb;141(2 Suppl):e691S-e736S. doi: 10.1378/chest.11-2300. PubMed PMID: 22315276; PubMed Central PMCID: PMCPMC3278054. eng. This is an important evidence-based guideline providing practical clinical guidance on the prevention and treatment of pregnancy related VTE
20. Chan WS, Lee A, Spencer FA, et al. Predicting deep venousthrombosis in pregnancy: out in "LEFt" field? Ann Intern Med 2009;151(2):85–92
21. Bates SM, Middeldorp S, Rodger M, et al. Guidance for the treatment and prevention of obstetric-associated venous thromboembolism. Journal of thrombosis and thrombolysis.2016 Jan;41(1):92-128. doi:10.1007/s11239-015-1309-0. PubMed PMID: 26780741;PubMed Central PMCID: PMCPMC4715853. eng.
22. Chan WS, Rey E, Kent NE, et al. VTE in Pregnancy Guideline Working Group Society of Obstetricians and Gynecologists of Canada. Venous thromboembolism and antithrombotic therapy in pregnancy. J Obstet Gynaecol Can 2014;357:527-53. doi:10.1016/S1701-2163(15)30569-7 pmid:24927193
23. Warkentin, T. E., & Greinacher, A. (2004). Heparin-Induced Thrombocytopenia: Recognition, Treatment, and Prevention. Chest, 126(3), 311S–337S. doi:10.1378/chest.126.3_suppl.311s
24. Silver RM.New anticoagulants and pregnancy. Obstet Gynecol 2008;112(2):part 2.
25. Fogerty, A. E. (2018). Management of Venous Thromboembolism in Pregnancy. Current Treatment Options in Cardiovascular Medicine, 20(8). doi:10.1007/s11936-018-0658-3
26. Chaudhary RK, Nepal C, Khanal N, et al. Management and outcome of heparin-induced thrombocytopenia in pregnancy: a systematic review. Cardiovasc Hematol Agents Med Chem. 2015;13:92–7
27. Gris JC, Lissalde-Lavigne G, Quere I, Mares P. Monitoring the effects and managing the side effects of anticoagulation during pregnancy.Obstet Gynecol Clin N Am 2006;33:397-411.
28. Sultan AA, Tata LJ, West J, Fiaschi L, Fleming KM, Nelson- Piercy C, Grainge MJ. Risk factors for first venous thromboem-bolism around pregnancy: a population-based cohort study fromthe United Kingdom. Blood 2013; 121: 3953–61.
29. Righini M, Robert-Ebadi H, Elias A, et al; CT-PE-Pregnancy Group. Diagnosis of pulmonary embolism during pregnancy: a multicenter prospective management outcome study. Ann Intern Med 2018;169:766-773
30. Castellano JM, Narayan RL, Vaishnava P, Fuster V. Anticoagulation during pregnancy in patients with a prosthetic heart valve. Nat Rev Cardiol 2012;9(7):415–424
31. Ipekci A. Pulmonary Embolism 2019. Phnx Med J. 2019;1(1):51-63
32. Simcox, L. E., Ormesher, L., Tower, C., & Greer, I. A. (2015). Pulmonary thrombo-embolism in pregnancy: diagnosis and management. Breathe, 11(4), 282–289. doi:10.1183/20734735.008815
33. Le Gal G, Righini M, Roy PM, Sanchez O, Aujesky D,Bounameaux H, et al. Prediction of pulmonary embolism in the emergency department: the revised Geneva score. Ann Intern Med.

2006;144:165-71. [PMID: 16461960)
34. Tromeur, C., van der Pol, L. M., Le Roux, P.-Y., Ende-Verhaar, Y., Salaun, P.-Y., Leroyer, C., … Klok, F. A. (2018). Computed tomography pulmonary angiography versus ventilation-perfusion lung scan for pulmonary embolism diagnosis during pregnancy: a systematic review and meta-analysis. Haematologica, haematol.2018.196121. doi:10.3324/haematol.2018.196121
35. Dado, C. D., Levinson, A. T., & Bourjeily, G. (2018). Pregnancy and Pulmonary Embolism. Clinics in Chest Medicine, 39(3), 525–537. doi:10.1016/j.ccm.2018.04.007
36. Greer I, Thomson AJ. Green-top Guideline No. 37b - thromboembolic disease in pregnancy and the puerperium: acute management. London, Royal College of Obstetricians and Gynaecologists, 2015.
37. Harris, S. A., Velineni, R., & Davies, A. H. (2016). Inferior Vena Cava Filters in Pregnancy: A Systematic Review. Journal of Vascular and Interventional Radiology, 27(3), 354–360.e8. doi:10.1016/j.jvir.2015.11.024
38. Arseven O, Sevinç C, Alataş F, Ekim N, Erkan L, Fındık S ve ark. Türk Toraks Derneği Pulmoner Tromboembolizm Tanı ve Tedavi Uzlaşı Raporu. Türk Toraks Dergisi 2009;10(Ek11):1-46.