

BÖLÜM 24

Gebelikte Anestezi



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Giriş

Gebelikte anestezinin en önemli risklerinden biri travayda mide boşalmasının yavaşlamasına bağlı olarak görülebilen aspirasyon riskidir. Plasenta previa, ablasyo plasenta ve preeklampsi gibi obstetrik hadiseler de gebelik anestezisinin diğer riskleridir. Tüm potansiyel risklerine rağmen anestezi ilişkili mortalite, günümüzde maternal mortalitenin en az görülen nedenlerinden olup bir milyon canlı doğum başına yaklaşık beş olarak belirtilmektedir.

Anestezi ilişkili maternal mortalite oranı yıllar içerisinde azalma eğiliminde olup, bunun en önemli nedeni genel anestezinin günümüzde sadece acil endikasyonlu cerrahilerde uygulanıyor olmasıdır(1). Genel anesteziye bağlı maternal mortalitenin en sık sebebi entübasyon başarısızlığı iken; reyonel anesteziye bağlı ölümler sıklıkla yüksek spinal/epidural blok nedenlidir.

Doğum Ağrısına Karşı Maternal Fizyolojik Cevaplar

Doğum eyleminin başlangıcındaki ağrı, uterus kontraksiyonları ve servikal dilatasyona bağlı olarak 10, 11 ve 12. torakal spinal sinirlerin posterior segmentleri ile medulla spinalise girerek iletilir. Doğumun ilerleyen evrelerinde ise fetal baş basisına bağlı pelvik taban ve perineal gerilmeden dolayı hissedilen ağrı ise n.pudens ve S2-S4 aralığından medulla spinalise giren lifler tarafından iletilir.

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Kaynaklar

1. Bloom SL, Spong CY, Weiner SJ, Landon MB, Rouse DJ, Varner MW, et al. Complications of anesthesia for cesarean delivery. *Obstetrics and gynecology*. 2005;106(2):281-7.
2. Morishima HO, Yeh M-N, James LS. Reduced uterine blood flow and fetal hypoxemia with acute maternal stress: experimental observation in the pregnant baboon. *American journal of obstetrics and gynecology*. 1979;134(3):270-5.
3. Reynolds F, Sharma SK, Seed PT. Analgesia in labour and fetal acid-base balance: a meta-analysis comparing epidural with systemic opioid analgesia. *BJOG: an international journal of obstetrics and gynaecology*. 2002;109(12):1344-53.
4. Ding T, Wang D-X, Qu Y, Chen Q, Zhu S-N. Epidural labor analgesia is associated with a decreased risk of postpartum depression: a prospective cohort study. *Anesthesia & Analgesia*. 2014;119(2):383-92.
5. O'sullivan GM, Sutton AJ, Thompson SA, Carrie LE, Bullingham RE. Noninvasive measurement of gastric emptying in obstetric patients. *Anesthesia and Analgesia*. 1987;66(6):505-11.
6. Bricker L, Lavender T. Parenteral opioids for labor pain relief: a systematic review. *American journal of obstetrics and gynecology*. 2002;186(5):S94-S109.
7. Sharma SK, McIntire DD, Wiley J, Leveno KJ. Labor analgesia and cesarean delivery: an individual patient meta-analysis of nulliparous women. *The Journal of the American Society of Anesthesiologists*. 2004;100(1):142-8.
8. Hatjis CG, Meis PJ. Sinusoidal fetal heart rate pattern associated with butorphanol administration. *Obstetrics and gynecology*. 1986;67(3):377-80.
9. Stocki D, Matot I, Einav S, Eventov-Friedman S, Ginosar Y, Weiniger CF. A randomized controlled trial of the efficacy and respiratory effects of patient-controlled intravenous remifentanil analgesia and patient-controlled epidural analgesia in laboring women. *Anesthesia & Analgesia*. 2014;118(3):589-97.
10. Waring J, Mahboobi SK, Tyagaraj K, Eddi D. Use of remifentanil for labor analgesia: the good and the bad. *Anesthesia & Analgesia*. 2007;104(6):1616-7.
11. Barbieri RL, Camann W, McGovern C. Nitrous oxide for labor pain. Should your birthing unit make nitrous oxide available for your laboring patients? *OBG Management*. 2014;26:1014.
12. Mulroy MF. Systemic toxicity and cardiotoxicity from local anesthetics: incidence and preventive measures. *Regional Anesthesia & Pain Medicine*. 2002;27(6):556-61.
13. Neal JM, Mulroy MF, Weinberg GL. American Society of Regional Anesthesia and Pain Medicine checklist for managing local anesthetic systemic toxicity: 2012 version. *Regional Anesthesia & Pain Medicine*. 2012;37(1):16-8.
14. Ngan Kee W, Khaw K, Ng F. Comparison of phenylephrine infusion regimens for maintaining maternal blood pressure during spinal anaesthesia for Caesarean section. *British Journal of Anaesthesia*. 2004;92(4):469-74.
15. Webb CA-J, Weyker PD, Zhang L, Stanley S, Coyle DT, Tang T, et al. Unintentional dural puncture with a Tuohy needle increases risk of chronic headache. *Anesthesia & Analgesia*. 2012;115(1):124-32.
16. Davies JM, Posner KL, Lee LA, Cheney FW, Domino KB. Liability associated with obstetric anesthesia: a closed claims analysis. *The Journal of the American Society of Anesthesiologists*. 2009;110(1):131-9.
17. Paech MJ, Doherty DA, Christmas T, Wong CA. The volume of blood for epidural blood patch in obstetrics: a randomized, blinded clinical trial. *Anesthesia & Analgesia*. 2011;113(1):126-33.
18. Scavone BM, Wong CA, Sullivan JT, Yaghmour E, Sherwani SS, McCarthy RJ. Efficacy of a prophylactic epidural blood patch in preventing post dural puncture headache in parturients after inadvertent dural puncture. *The Journal of the American Society of Anesthesiologists*. 2004;101(6):1422-7.



19. Shearer VE, Jhaveri HS, Cunningham FG. Puerperal seizures after postdural puncture headache. *Obstetrics & Gynecology*. 1995;85(2):255-60.
20. Millet L, Shah S, Bartholomew ML. Rates of bacteriuria in laboring women with epidural analgesia: continuous vs intermittent bladder catheterization. *American journal of obstetrics and gynecology*. 2012;206(4):316. e1-. e7.
21. Setayesh AR, Kholdebarin AR, Moghadam MS, Setayesh HR. The Trendelenburg position increases the spread and accelerates the onset of epidural anesthesia for Cesarean section. *Canadian Journal of Anesthesia*. 2001;48(9):890-3.
22. Halpern SH, Carvalho B. Patient-controlled epidural analgesia for labor. *Anesthesia & Analgesia*. 2009;108(3):921-8.
23. Chestnut DH, Owen CL, Bates JN, Ostman LG, Choi WW, Geiger MW. Continuous infusion epidural analgesia during labor: a randomized, double-blind comparison of 0.0625% bupivacaine/0.0002% fentanyl versus 0.125% bupivacaine. *Anesthesiology*. 1988;68(5):754-9.
24. Sprigge J, Harper S. Accidental dural puncture and post dural puncture headache in obstetric anaesthesia: presentation and management: a 23-year survey in a district general hospital. *Anaesthesia*. 2008;63(1):36-43.
25. Hess PE, Pratt SD, Lucas TP, Miller CG, Corbett T, Oriol N, et al. Predictors of breakthrough pain during labor epidural analgesia. *Anesthesia & Analgesia*. 2001;93(2):414-8.
26. Dresner M, Brocklesby J, Bamber J. Audit of the influence of body mass index on the performance of epidural analgesia in labour and the subsequent mode of delivery. *BJOG: An International Journal of Obstetrics & Gynaecology*. 2006;113(10):1178-81.
27. Sharma SK, Sidawi EJ, Ramin SM, Lucas MJ, Leveno KJ, Cunningham GF. Cesarean delivery: a randomized trial of epidural versus patient-controlled meperidine analgesia during labor. *The Journal of the American Society of Anesthesiologists*. 1997;87(3):487-94.
28. Lieberman E, O'Donoghue C. Unintended effects of epidural analgesia during labor: a systematic review. *American journal of obstetrics and gynecology*. 2002;186(5):S31-S68.
29. Sharma SK, Rogers BB, Alexander JM, McIntire DD, Leveno KJ. A randomized trial of the effects of antibiotic prophylaxis on epidural-related fever in labor. *Anesthesia & Analgesia*. 2014;118(3):604-10.
30. Grant GJ. Safely giving regional anesthesia to gravidas with clotting disorders-Regional pain relief may be too risky in patients with coagulation disorders, whether the disorders are induced by anticoagulants to manage or prevent adverse pregnancy outcomes linked with VTE or thrombophilia, or due to a coagulopathy. Benefits and risks can include a rare but catastrophic complication: Spinal hematoma. *Contemporary OB/GYN*. 2007:40.
31. Chestnut DH, Vincent RD, McGrath JM, Choi WW, Bates JN. Does early administration of epidural analgesia affect obstetric outcome in nulliparous women who are receiving intravenous oxytocin? *The Journal of the American Society of Anesthesiologists*. 1994;80(6):1193-200.
32. Miro M, Guasch E, Gilsanz F. Comparison of epidural analgesia with combined spinal-epidural analgesia for labor: a retrospective study of 6497 cases. *International journal of obstetric anesthesia*. 2008;17(1):15-9.
33. Young MJ, Gorlin AW, Modest VE, Quraishi SA. Clinical implications of the transversus abdominis plane block in adults. *Anesthesiology Research and Practice*. 2012;2012.
34. Kinsella S, Winton A, Mushambi M, Ramaswamy K, Swales H, Quinn A, et al. Failed tracheal intubation during obstetric general anaesthesia: a literature review. *International journal of obstetric anesthesia*. 2015;24(4):356-74.
35. Heesen M, Klöhr S, Hofmann T, Rossaint R, Devroe S, Straube S, et al. Maternal and foetal effects of remifentanil for general anaesthesia in parturients undergoing caesarean section: a systematic review and meta-analysis. *Acta anaesthesiologica Scandinavica*. 2013;57(1):29-36.
36. Marik PE. Aspiration pneumonitis and aspiration pneumonia. *New England Journal of Medicine*. 2001;344(9):665-71.