

OBSTETRİK ANESTEZİ

16. BÖLÜM

Nazan HAS SELMi¹

1.Giriş

Birleşmiş Milletler (BM) bin yıllık kalkınma hedeflerinin (BKH) kabulünden bu yana anne sağkalımı önemli ölçüde artmıştır, anne ölüm oranı 1990'dan 2015'e kadar ülkelerin %44'ünde azalmıştır; bu ölümlerin neredeyse tamamı düşük ve orta gelirli ülkelere olmuştur, maternal mortalite hızı yüksek gelirli ülkelere göre yaklaşık 14 kat daha yüksektir(1) .Ölümlerin çoğu kanama, sepsis, pre-eklampsi, doğum komplikasyonları, güvensiz kürtaj ve şiddet gibi önlenebilir sebeplerdir.(2).

Dünya Anestezi Dernekleri Federasyonu (WFSA), hasta bakımı ve dünya çapında güvenli anesteziye erişimi geliştirmek için sivil toplum kuruluşlarıyla birlikte çalışmaya kendini adanmıştır. Anestezi hizmetlerinin geliştirilmesi evrensel sağlık açısından hayati önem taşımaktadır(3).

2.Obstetrik havayolu yönetimi

Obstetrik hava yolu yönetimi başarısız trakeal entübasyon ve hava yolu ile ilgili morbidite ve mortalite riski ile ilişkilidir. Bir literatür incelemesinde başarısız trakeal entübasyon insidansının her 1000 obstetrik genel anestezide 2,6 (390'da 1) ve ilişkili maternal mortalite oranı 100.000'de 2.3 (her doksan başarısız entübasyonda bir ölüm) olarak belirtilmiştir.(4)

Anatomik, fizyolojik faktörler gebeliğin anatomik ve fizyolojik değişiklikleri, başarısız trakeal entübasyon oranının ve hava yolu ile ilişkili advers olayların artmasına katkıda bulunabilmektedir (Tablo 1).

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KAYNAKÇA

1. www.wfsahq.org/resources/update-in-anaesthesia
2. Alkema L, Chou D, Hogan D, et al. Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *Lancet*. 2016; 387: 462-74.
3. WFSA Releases Position Statement on Anaesthesiology and Universal Health Coverage (UHC). https://www.wfsahq.org/images/UHC_Position Statement_Final.pdf Accessed 10 December, 2018.
4. Kinsella SM, Winton AL, Mushambi MC, et al. Failed tracheal intubation during obstetric general anaesthesia: a literature review. *Int J Obstet Anesth*. 2015; 24:356-74.
5. Quinn AC, Milne D, Columb M, et al. Failed tracheal intubation in obstetric anaesthesia: 2 yr national case-control study in the UK. *Br J Anaesth* 2012; 110: 74-80.
6. O'Sullivan G. Gastric emptying during pregnancy and the puerperium. *Int J Obstet Anesth* 1993; 2: 216-24.
7. Van de Putte P, Perlas A. Ultrasound assessment of gastric content and volume. *Br J Anaesth* 2014; 113: 12-22.
8. Mushambi MC, Kinsella SM, Popat M, et al. Obstetric Anaesthetists' Association and Difficult Airway Society guidelines for the management of difficult and failed tracheal intubation in obstetrics. *Anaesthesia*. 2015; 70: 1286-306.
9. Kristensen MS, Teoh WH, Rudolph SS. Ultrasonographic identification of the cricothyroid membrane: best evidence, techniques, and clinical impact. *Br J Anaesth* 2016; 117 (S1): i39-i46.
10. Obstetric airway management L Bordoni,¹ K Parsons,² and MWM Rucklidge^{3*}
*Correspondence email: Matthew.rucklidge@health.wa.gov.au doi: 10.1029/WFSA-D-18-00019
11. Angerman S, Kirves H, Nurmi J. A before-and-after observational study of a protocol for use of the C-MAC videolaryngoscope with a Frova introducer in pre-hospital rapid sequence intubation. *Anaesthesia*. 2018; 73: 348-55.
12. Heard AM, Green RJ, Eakins P. The formulation and introduction of a 'can't intubate, can't ventilate' algorithm into clinical practice. *Anaesthesia* 2009; 64: 601-8.
13. Rucklidge MW, Yentis SM. Obstetric difficult airway guidelines - decision making in critical situations. *Anaesthesia*. 2015; 70: 1221-5.
14. Emergency management of maternal collapse and arrest Elizabeth Yates and Richard Kaye* *Correspondence email: richardkaye@nhs.net doi: 10.1029/WFSA-D-18-00022
15. Pre-eclampsia: prevention, diagnosis and management Philip Hassell* and Anoop Surendran *Correspondence email: phil_hassell@hotmail.com doi:10.1029/WFSA-D-19-00004
16. Anaesthetic implications of morbid obesity in pregnancy Clinical Articles Yavor Metodiev* and Mary Mushambi *Correspondence email: yavor.metodiev1@nhs.net doi: 10.1029/WFSA-D-18-00013
17. www.who.int/topics/obesity/en/. Accessed 19th May 2018.
18. Heslehurst N, Lang R, Rankin J, Wilkinson JR, Summerbell CD. Obesity in pregnancy: a study of the impact of maternal obesity on NHS maternity services. *BJOG* 2007; 114(3): 334 – 42. 3
19. Centre for Maternal and Child Enquires (CMACE). Maternal obesity in the UK: Fin-

- dings from a national project. London: CMACE 2010.
20. Lamon AM, Habib AS. Managing anesthesia for caesarean section in obese patients: current perspectives. *Local Reg Anesth* 2016; 16(9): 45 – 57.
 21. Update in obstetric trauma management Nesrine Refa*, Reham Abdel Rahman Ali and Hala Gomaa *Correspondence email: nesrinerefai@hotmail.com doi: 10.1029/WFSA-D-18-00018
 22. Emir Battaloglu, Eren Battaloglu, Justin Chu and Keith Porter. *Obstetrics in trauma. Trauma* 2015, Vol. 17(1) 17–23.
 23. 4. Mendez-Figueroa H., Dahlke J.D., Vrees R.A. et al. Trauma in pregnancy: An updated systematic review. *American Journal of Obstetrics and Gynecology* 2013
 24. Oxytocics Madhusudan Upadya* and Mahesh Nayak *Correspondence email: madhusudan.upadya@manipal.edu doi:10.1029/WFSA-D-18-00033
 25. Velayudhareddy S, KirankumarH Management of foetal asphyxia by intrauterine foetal resuscitation *Indian J Anaesth* 2010; 54: 394-9
 26. Day LT, Hruschka D, Mussell F, et al. Perinatal mortality associated with use of uterotonics outside of comprehensive emergency obstetric and neonatal care: a cross-sectional study. *Reproductive Health* 2016; 13: 129. Also available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5054615/> (last accessed at 30th September 2018)
 27. Gemma L Malin, Rachel K Morris, Khalid S Khan. Strength of association between umbilical cord pH and perinatal and long term outcomes: systematic review and meta-analysis. *BMJ* 2010; 340: c1471
 28. Nina Kylie Dorothy Walton, Venkata Krishnaker Melachuri; Anaesthesia for non obstetric surgery during pregnancy, *Continuing Education in Anaesthesia Critical Care & Pain*, Volume 6, Issue 2, 1 April 2006, Pages 83–85
 29. Mazze RI, Källén B. Reproductive outcome after anaesthesia and operation during pregnancy: a registry study of 5405 cases, *Am J Obstet Gynecol*, 1989, vol. 161 (pg. 1178-85)
 30. Dietrich CS, Hill CC, Hueman M. Surgical diseases presenting in pregnancy. *Surg Clin North Am* 2008; 88: 403-419
 31. Van De Velde M, De Buck F. Anaesthesia for non-obstetric surgery in the pregnant patient, *Minerva Anesthesiol*, 2007, vol. 73 (pg. 235-40)
 32. Ravindra G L, Madamangalam AS, Seetharamaiah S. Anaesthesia for non obstetric surgery in obstetric patients. *Indian J Anaesth* 2018; 62: 710-6
 33. Walton NK, Melachuri VK. Anaesthesia for non-obstetric surgery during pregnancy. *Contin Educ Anaesth Crit Care Pain*. 2006; 6: 83–5
 34. Bhavani-Shankar K, Steinbrook RA, Brooks DC, Datta S. Arterial to end-tidal carbon dioxide pressure difference during laparoscopic surgery in pregnancy. *Anesthesiology* 2000; 93: 3703
 35. Bauer ME, Chiware R, Pancaro C. Neuraxial procedures in COVID-19 positive parturients: a review of current reports. *Anesth Analg* 2020
 36. Frölich et al., *Can J Anaesth*. 2006 Jan;53(1):79-85.)
 37. Manouchehrian N, et al., *Anesth Pain Med*. 2014;4(2):e16662).
 38. Lee AJ et al., Left Lateral Table Tilt for Elective Cesarean Delivery under Spinal Anesthesia Has No Effect on Neonatal Acid-Base Status: A Randomized Controlled Trial. *Anesthesiology*. 2017;127(2):241.
 39. Tsai SE, Yeh PH, Hsu PK, et al. Continuous haemodynamic effects of left tilting and supine positions during Caesarean section under spinal anaesthesia with a nonin-

- vasive cardiac output monitor system. *Eur J Anaesthesiol* 2019; 36:72
40. Chatmongkolchart S, Prathep S. Supplemental oxygen for caesarean section during regional anaesthesia. *Cochrane Database Syst Rev* 2016; 3:006161
 41. Banerjee A, Stocche RM, Angle P, Halpern SH. Preload or coload for spinal anesthesia for elective Cesarean delivery: a meta-analysis. *Can J Anaesth* 2010; 57:24
 42. Guglielminotti J, Landau R, Li G. Adverse Events and Factors Associated with Potentially Avoidable Use of General Anesthesia in Cesarean Deliveries. *Anesthesiology* 2019; 130:912.
 43. Yoo KY, Lee JC, Yoon MH, et al. The effects of volatile anesthetics on spontaneous contractility of isolated human pregnant uterine muscle: a comparison among sevoflurane, desflurane, isoflurane, and halothane. *Anesth Analg* 2006; 103:443
 44. Horn EP, Schroeder F, Gottschalk A, et al. Active warming during cesarean delivery. *Anesth Analg* 2002; 94:409