

# BÖLÜM 18



## ÖZOFAGUS CERRAHİLERİNDE POSTOPERATİF YOĞUN BAKIM

Necdet BOLAT<sup>1</sup>  
Yavuz ÇEÇEN<sup>2</sup>

### ÖZET

Özofagusun cerrahi tedavi gerektiren hastalıkları divertiküler, motilite bozuklukları ve kanserleri olarak karşımıza çıkmaktadır.

Anatomik olarak özofagus posterior mediastende yer alır. Önemli anatomi komşuluklarını trachea, kalp ve akciğerler oluşturmaktadır. Özofagus cerrahileri sonrasında gelişen cerrahi olmayan komplikasyonlar da bu anatomi komşulukları ile ilişkili olarak gelişir.

Postoperatif dönemde yoğun bakım izlemi gereken özofagus cerrahisi hastalarında cerrahi komplikasyonların takibi kadar cerrahi olmayan komplikasyonların da takip ve yönetimi mortalite ve morbidite üzerine etkilidir.

Tüm yoğun bakım hastalarında olduğu gibi özofagus cerrahisi sonrasında uygulanacak yoğun bakım pratığında FAST HUGS BID kodlaması kullanılabilir.

Yoğun preoperatif solunum rehabilitasyonu ve beslenme desteği, özofajektoni sonrası postoperatif pulmoner komplikasyonları azaltır.

<sup>1</sup> Uzm. Dr., Bayburt Devlet Hastanesi Erişkin 2. Basamak Yoğun Bakım, necdetbolat@gmail.com

<sup>2</sup> Uzm. Dr., Samsun Eğitim ve Araştırma Hastanesi Anestezi Kliniği Yoğun bakım, yavuzcечен@hotmail.com



mü için pulmoner arter kateteri gerekmektedir. Santral venöz kateterden ölçüm yapabilen santral venöz oksijen ölçümü ile miks venöz oksijen ölçümü arasında miks venöz oksijen saturasyonunun fazlalığı lehine %2-3'lük bir fark vardır (47). Yine lüzum halinde hastalarda nörolojik monitörizasyon için Glaskow koma skorlaması, EEG, uyarılmış potansiyeller, intrakranial basınç momnitörizasyonu, serebral kan akımı monitörizasyonu (Transkranial doppler inceleme ile) ve serebral metabolizma monitörizasyonu için NIRS(Near infrared spectroscopy) yöntemleri kullanılabilir (47).

**COVID-19 pandemisi sırasında özel hususlar:** COVID-19 salgını, kanser tedavisinin karmaşıklığını artırdı. Önemli konular arasında kanser tedavisini geciktirme riskinin COVID-19'dan kaynaklanan zarara karşı dengelenmesi, mümkün olduğunda maruziyeti azaltmak için klinik ve hastane ziyaretlerinin sayısının en aza indirilmesi, sosyal mesafenin bakım sunumu üzerindeki olumsuz etkilerinin azaltılması ve sınırlı sağlık hizmetlerinin uygun ve adil bir şekilde tahsis edilmesi yer alıyor. COVID-19 ile ilgili tedbirler, uygulamalar pandemi seyri ve yerel kurulların aldığı kararlarla göre değişiklik göstermektedir.

## KAYNAKLAR

- Low DE, Kuppusamy MK, Alderson D, Ceccarello I, Chang AC, Darling G, et al. Benchmarking complications associated with esophagectomy. *Ann Surg.* 2019;269:291–8.
- Walters DM, McMurry TL, Isbell JM, Stukenborg GJ, Kozower BD. Understanding mortality as a quality indicator after esophagectomy. *Ann Thorac Surg.* 2014 Aug;98(2):506-11; discussion 511-2. doi: 10.1016/j.athoracsur.2014.03.041. Epub 2014 May 17. PMID: 24841544.
- Law S, Wong K.H, Kwok K.F, Chu K.M, Wong J. Predictive factors for postoperative pulmonary complications and mortality after esophagectomy for cancer. *Ann Surg.* 2004; 240: 791-800
- Avendano C.E, Flume P.A, Silvestri G.A, King L.B, Reed C.E. Pulmonary complications after esophagectomy. *Ann Thorac Surg.* 2002; 73: 922-926
- Vincent JL. Give your patient a fast hug (at least) once a day. *Crit Care Med.* 2005 Jun;33(6):1225-9. doi: 10.1097/01.ccm.0000165962.16682.46. PMID: 15942334.
- Vincent WR 3rd, Hatton KW. Critically ill patients need "FAST HUGS BID" (an updated mnemonic). *Crit Care Med* 2009;37:2326-7.
- Chinkungwa M. Extend 'FAST HUG' with 'FAITH'. *JICS* 2010;11:69-70
- Wolberg AS, Meng ZH, Monroe DM 3rd, Hoffman M. A systematic evaluation of the effect of temperature on coagulation enzyme activity and platelet function. *J Trauma.* 2004 Jun;56(6):1221-8. doi: 10.1097/01.ta.0000064328.97941.fc. PMID: 15211129.
- Journal of Parenteral and Enteral Nutrition Volume 40 Number 2 February 2016 159–211 © 2016 American Society for Parenteral and Enteral Nutrition and Society of Critical Care Medicine DOI: 10.117
- Journal of Parenteral and Enteral Nutrition Volume 40 Number 2 February 2016 159–211 © 2016 American Society for Parenteral and Enteral Nutrition and Society of Critical Care Medicine
- Kaaki S, Grigor EJM, Maziak DE, Seely AJE. Early oral intake and early removal of nasogastric tube post-esophagectomy: A systematic review and meta-analysis. *Cancer Rep (Hoboken).* 2022 May;5(5):e1538. doi: 10.1002/cnr.21538. Epub 2021 Sep 7. PMID: 34494402; PMCID: PMC9124520. Fujita T, Daiko H,
- Nishimura M (2012) Early Enteral Nutrition Reduces The Rate Of Life-Threatening Complications After Thoracic Esophagectomy in Patients With Esophageal Cancer. *Eur Surg Res* 48:79–84



13. Mazaki T, Ebisawa K (2008) Enteral versus parenteral nutrition after gastrointestinal surgery: a systematic review and metaanalysis of randomized controlled trials in the English literature. *J Gastrointest Surg* 12:739–755
14. Low, D.E., Allum, W., De Manzoni, G., Giovanni De Manzoni, , Lorenzo Ferri, , et al. Guidelines for Perioperative Care in Esophagectomy: Enhanced Recovery After Surgery (ERAS®) Society Recommendations. *World J Surg* 43, 299–330 (2019).
15. Sun HB, Li Y, Liu XB, Rui-Xiang Zhang , Zong-Fei Wang, Toni Lerut et al. Early Oral Feeding Following McKeown Minimally Invasive Esophagectomy: An Open-label, Randomized, Controlled, Noninferiority Trial. *Ann Surg* 2018; 267:435.
16. Phillips DM. JCAHO Pain Management Standards Are Unveiled. *JAMA* 2000;284:428-9.
17. Jacobi J, Fraser GL, Coursin DB, Riker RR, Fontaine D, Wittbrodt ET, et al. Clinical practice guidelines for the sustained use of sedatives and analgesics in the critically ill adult. *Crit Care Med* 2002;30:119-41.
18. Baidya DK, Khanna P, Maitra S (2014) Analgesic efficacy and safety of thoracic paravertebral and epidural analgesia for thoracic surgery: a systematic review and meta-analysis. *Interact Cardiovasc Thorac Surg* 18:626–635
19. Rasheed AM, Amrith MF, Abdallah M, P J P, Issa M, Alharthy A. Ramsay Sedation Scale and Richmond Agitation Sedation Scale: A Cross-sectional Study. *Dimens Crit Care Nurs*. 2019 Mar / Apr;38(2):90-95. doi: 10.1097/DCC.0000000000000346. PMID: 30702478.
20. Senoglu N, Köse I, Zincircioğlu Ç, Erbay R.H. Yoğun Bakımla Hızlı Kucaklaşma (Fast Hugs) Türk Yoğun Bakım Derneği Dergisi (2014)12: 72-81
21. Ng KT, Shubash CJ, Chong JS. The effect of dexmedetomidine on delirium and agitation in patients in intensive care: systematic review and meta-analysis with trial sequential analysis. *Anaesthesia*. 2019 Mar;74(3):380-392. doi: 10.1111/anae.14472. Epub 2018 Oct 27. PMID: 30367689.
22. Mantzari S, Gronnier C, Pasquer A, Johan Gagnière, Jérémie Théreaux, Nicolas Demartines, et al (2016) Incidence and risk factors related to symptomatic venous thromboembolic events after esophagectomy for cancer. *Ann Thorac Surg* 102:979–984
23. Geerts W, Selby R. Prevention of venous thromboembolism in the ICU. *Chest* 2003;124:357-63.
24. Morris RJ, Woodcock JP (2010) Intermittent pneumatic compression or graduated compression stockings for deep vein thrombosis prophylaxis? A systematic review of direct clinical comparisons. *Ann Surg* 251:393–396
25. Akl EA, Labedi N, Terrenato I, Barba M, Sperati F, Sempos EV, et al. (2011) Low molecular weight heparin versus unfractionated heparin for perioperative thromboprophylaxis in patients with cancer. *Cochrane Database Syst Rev* CD009447
26. Kearon C, Kahn SR, Agnelli G, Goldhaber S, Raskob GE, Comerota AJ; American College of Chest Physicians. Antithrombotic therapy for venous thromboembolic disease: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. 8th ed. *Chest* 2008;133(6 Suppl):S45S-545S.
27. Warkentin TE, Greinacher A, Koster A, Lincoff AM; American College of Chest Physicians. Treatment and prevention of heparin-induced thrombocytopenia: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). *Chest* 2008;133(6 Suppl):S40S-80S.
28. Dietmer F. Thrombosis prophylaxis in critically ill patients. *Wien Med Wochenschr* 2011;161 (3-4):68-72.
29. Guyatt GH, Akl EA, Crowther M, Guterman DD, Schuünemann HJ. American College of Chest Physicians Antithrombotic Therapy and Prevention of Thrombosis Panel. Executive summary: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest* 2012;141(2 Suppl):7S-47S.
30. Nagler M, Haslauer M, Wuillemin WA. Fondaparinux - data on efficacy and safety in special situations. *Thromb Res* 2012;129(4):407-17.



31. Drakulovic MB, Torres A, Bauer TT, Nicolas JM, Nogué S, Ferrer M. Supine body position as a risk factor for nosocomial pneumonia in mechanically ventilated patients: A randomised trial. *Lancet* 1999;354:1851-8.
32. Ye Z, Reintam Blaser A, Lytvyn L, Wang Y, Guyatt G H, Mikita J S et al. Gastrointestinal bleeding prophylaxis for critically ill patient: a clinical practice guideline *BMJ* 2020; 368:16722 doi:10.1136/bmj.16722.
33. NICE-SUGAR Study Investigators, Finfer S, Chittock DR, Su SY, Blair D, Foster D, Dhingra V, at al. Intensive versus conventional glucose control in critically ill patients. *N Engl J Med.* 2009 Mar 26;360(13):1283-97. doi: 10.1056/NEJMoa0810625. Epub 2009 Mar 24. PMID: 19318384.
34. Short V, Herbert G, Perry R, Rachel Perry, Charlotte Atkinson, Andrew R Ness, at al. (2015) Chewing gum for postoperative recovery of gastrointestinal function. *Cochrane Database Syst Rev* CD006506 231.
35. Bundgaard-Nielsen M, Holte K, Secher NH, H Kehlet. (2007) Monitoring of peri-operative fluid administration by individualized goal-directed therapy. *Acta Anaesthesiol Scand* 51:331–340
36. Jorgensen H, Wetterslev J, Moiniche S , J B Dahl. (2000) Epidural local anaesthetics versus opioid-based analgesic regimens on postoperative gastrointestinal paralysis, PONV and pain after abdominal surgery. *Cochrane Database Syst Rev* CD001893
37. Wittenstein J, Ball L, Pelosi P, Gama de Abreu M. High-flow nasal cannula oxygen therapy in patients undergoing thoracic surgery: current evidence and practice. *Curr Opin Anaesthesiol* 2019; 32:44.
38. Michelet P, D'Journo XB, Seinaye F, J M Forel, L Papazian, P Thomas. Non-invasive ventilation for treatment of postoperative respiratory failure after oesophagectomy. *Br J Surg* 2009; 96:54.
39. Acıbadem Üniversitesi Sağlık Bilimleri Dergisi Özofajekomi Sonrası Pulmoner Komplikasyon Gelişen Olgular ve Tedavi Yaklaşımları A Mehmet Erdem Çakmak , Hayriye Cankar Dal , Derya Ademoğlu , Serdar Yamanyar , Büşra Tezcan , Dilek Kazancı at al. Özofajekomi Sonrası Pulmoner Komplikasyon Gelişen Olgular ve Tedavi Yaklaşımları D 2019 J Acıbadem Üniversitesi Sağlık Bilimleri Dergisi P 1309-470X-1309-5994 V N 2 R U
40. Minnella EM, Awasthi R, Loiselle SE, Ramanakumar V Agnihotram , Lorenzo E Ferri, Francesco Carli. Effect of Exercise and Nutrition Prehabilitation on Functional Capacity in Esophagogastric Cancer Surgery: A Randomized Clinical Trial. *JAMA Surg* 2018; 153:1081.
41. Low DE, Allum W, Giovanni De Manzoni , Lorenzo Ferri , Arul Immanuel · MadhanKumar Kuppusamy , at al. Guidelines for Perioperative Care in Esophagectomy: Enhanced Recovery After Surgery (ERAS®) Society Recommendations. *World J Surg* 2019; 43:299
42. Chu L, Fuller A. Manual of clinical anesthesiology. 1st edition. Philadelphia: Lippincott Williams & Wilkins; 2012. p.56.
43. Marik PE. Pulmonary artery catheterization and esophageal doppler monitoring in the ICU. *Chest* 1999;116(4):1085-91.
44. Munis JR, Bhatia S, Lozada LJ. Peripheral venous pressure as a hemodynamic variable in neuro-surgical patients. *Anesth Analg* 2001; 92(1):172-9.
45. Marik PE, Cavallazzi R, Vasu T, Hirani A. Dynamic changes in arterial waveform derived variables and fluid responsiveness in mechanically ventilated patients: a systematic review of the literature. *Crit Care Med* 2009;37(9):2642-7.
46. Nagler J, Krauss B. Capnography: a valuable tool for airway management. *Emerg Med Clin North Am.* 2008 Nov;26(4):881-97, vii.
47. Ekemen S, Özen E. Standard and Current Practices in Intensive Care Monitoring. *Turkiye Klinikleri J Intensive Care-Special Topics.* 2015;1(3):1-9