

Günübirlik Cerrahide Anestezi Yönetimi

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Giriş

Cerrahi işlemin yapıldığı gün evine gönderilmesi planlanan hastalara uygulanan cerrahiye, günübirlik cerrahi denir. Bu tür cerrahide uygulanan anestezi de günübirlik anestezi olarak tanımlanır (1). Geçtiğimiz 20 yılda minimal invaziv cerrahi tekniklerinde ve teknolojilerindeki gelişmelerin yanısıra sağlık giderlerini belirgin şekilde azaltması, günübirlik cerrahinin dünya çapında giderek yaygınlaşmasına neden olmuştur. Öyle ki Amerika Birleşik Devletlerindeki tüm cerrahi işlemlerin neredeyse %80'ini günübirlik cerrahi işlemler oluşturmaktadır. Yeni ve kısa etkili ilaçlar, eskiye oranla gelişmiş anestezi, postoperatif bulantı ve kusmayı (PONV) daha efektif şekilde önleyebilir oluşumuz ve postoperatif ağrı tedavisini yönetme yeteneğimizdeki artış bu süreçte olumlu katkı vermektedir (2).

Dünya nüfusu giderek yaşlanmaktadır. Birleşmiş Milletler Nüfus Dairesine göre, yaşlı nüfusunun 2045'te ilk kez çocuk nüfusunu geride bırakacak kadar artacağı ve dünya nüfusunun %32'sine yükseleceği tahmin edilmektedir (3). Amerika Birleşik Devletlerinde 1990'dan bu yana 75-84 yaş nüfusu %20 artış gösterirken 85 yaş ve üstü nüfusu %30 artış göstermiştir. Bu gerçeklerden, anestezi uzmanları ve cerrahlar dahil tüm klinisyenler için derin çıkarımlar sözkonusudur. Örneğin yaşlanma, bir bireyin ameliyat gerektirme olasılığını artırır. 45-60 yaşları arasındakilerin yaklaşık %12'si ameliyat olurken, bu sayı ≥65 yaşları arasındakilerde >%21'e yükselir. Ne yazık ki morbidite ve mortalite geriatrik popülasyonda özellikle 75 yaşından sonra artış gösterir. Bu artışa, hastanın preoperatif durumunun ve yaşlı bir popülasyona anestezi uygulanıyor olmasının intraoperatif ve postoperatif periyottaki çok yönlü etkileri de katkıda bulunmaktadır (4). Bu bölümde, günümüzde artık yaygın olarak tercih edilen günübirlik cerrahi işlemlerde anestezi yönetimi üzerinde durulmuştur.

TABLO 2. Modifiye Anestezi Sonrası Taburculuk Skorlama Sistemi (PADSS)

Vital bulgular	2 = normalin %20'sinde 1 = normalin%20 ile %40'ı 0 = normalin %40'ı
Ambulasyon ve zihinsel durum	2 = düzenli yürüme, baş dönmesi yok 1 = yardımla yürür 0 = yok / baş dönmesi
Bulantı ve kusma	2 = minimal 1 = orta 0 = şiddetli
Ağrı	2 = minimal 1 = orta 0 = şiddetli
Cerrahi kanama	2 = minimal 1 = orta 0 = şiddetli

(Not: Toplam anestezi sonrası derlenme skoru 9 ve üstünde ise taburcu edilir)

Sonuç olarak, yaşlı nüfus tüm dünyada giderek artmaktadır. Tıbbi ve ekonomik sebepler anestezi uzmanlarını yaşlı nüfusun gününbirlik cerrahiye uygunluğu, preoperatif hazırlığı, intraoperatif ve postoperatif yönetimi konusunda daha çok araştırmaya ve gelişmeye zorlayacak gibi görünmektedir.

Kaynaklar

1. White PF. Past, present, future in Ambulatory anesthesia and surgery. In: White PF editor. Ambulatory anesthesia and surgery. WB Saunders, Great Britain; 1997; 3-35.
2. McGoldrick KE. Postoperative nausea and vomiting. In: Afifi A, Rosenbaum S, eds. Problems in Anesthesia. Vol 12, No. 3. PACU and Anesthetic Management. Philadelphia: Lippincott Williams & Wilkins; 2000: 274-86.
3. United Nations. 'Major' rise in world's elderly population: DESA report, 28 January 2010. <http://www.un.org/en/development/desa/news/population/major-rise-in.html> (accessed 18 April 2019).
4. Ergina P, Gold S, Meakins J. Perioperative care of the elderly patient. World J Surg 1993; 17: 192-8.
5. Liu MC, Chen CC. Postoperative care after geriatric ambulatory surgery: several specific considerations. Int J Gerontology. 2008; 2 (3): 98-102.
6. Canet J, Raeder J, Rasmussen LS, Enlund M, Kuipers HM, Hanning CD, et al. Cognitive dysfunction after minor surgery in the elderly: Acta Anaesthesiol Scand 2003; 47: 1204-10.

7. Bajwa SJS, Sharma V, Sharma R, Singh PA, Anesthesia for Day-care Surgeries: Current Perspectives Medical Journal of Dr. D.Y. Patil University 2017; 10 (4): 327-33.
8. Ansell GL, Montgomery JE. Outcome of ASA III patients undergoing day case surgery. *Br J Anaesth.* 2004; 92 (1): 71-4.
9. P Sanjay, P Jones, Woodward A, Inguinal hernia repairs: are ASA grades 3 and 4 patients suitable for day case hernia repair? *Hernia.* 2006; 10 (4):299-302.
10. Chung F, Mezei G, Tong D. Adverse events in ambulatory surgery: a comparison between elderly and younger patients, *Can J Anaesth.* 1999; 46 (4): 309-21
11. Fortier J, Chung F, Su J. Unanticipated admission after ambulatory surgery: a prospective study. *Can J Anaesth.* 1998;45 (7): 612-9.
12. Fleisher LE, Pasternak LR, Herbert R, Anderson GF. Inpatient hospital admission and death after outpatient surgery in elderly patients. *Arch Surg.* 2004; 139 (1): 67-72
13. Lermite J, Chung F. Patient selection in ambulatory surgery. *Curr Opin Anaesth.* 2005; 18 (6): 598-602.
14. Stierer T, Fleisher LA. Challenging patients in an ambulatory setting. *Anesthesiol Clin North Am.* 2003; 21 (2): 243-61.
15. Insel K, Morrow D, Brewer B, Figueredo A. Executive function, working memory and medication adherence among older adults. *J Gerontol B Psychol Sci Soc Sci.* 2006; 61 (2): 102-7.
16. Repetto L, Venturino A, Vercelli M, et al . Performance status and comorbidity in elderly cancer patients compared with young patients with neoplasia and elderly patients without neoplasia conditions. *Cancer.* 1998; 82 (4): 760-5.
17. Dzankic S, Pastor D, Gonzalez C, Leung JM. The prevalence and predictive value of abnormal preoperative laboratory tests in elderly surgical patients. *Anesth Analg.* 2001; 93 (2): 301-8.
18. Chung F, Hongbo Y, Ling Yin, Vairavanathan S. Elimination of preoperative testing in ambulatory surgery. *Anesth Analg.* 2009; 108 (2): 467-75.
19. Emel Ünäl Bilge, Menşure Kaya, Gülçin Özalp Şenel, Süheyla Ünver; The Incidence of Delirium at the Postoperative Intensive Care Unit in Adult Patients, *Turk J Anaesth Reanim.* 2015; 43: 232-9.
20. Flinn DR, Diehl KM, Sevfried LS, Malani PN. Prevention, diagnosis and management of postoperative delirium in older adults. *J Am Coll Surg.* 2009; 209 (2): 261-8.
21. Fong TG, Jones RN, Rudolph JL, et al. Development and validation of a brief cognitive assessment tool: the sweet 16. *Arch Intern Med.* 2011; 171 (5): 432-7.
22. Blandford CM, Gupta BC, Montgomery J, Stocker ME. Ability of patients to retain and recall new information in the post anaesthetic recovery period: a prospective clinical study in day surgery. *Anaesthesia.* 2011; 66 (12): 1088-92.
23. Kurzer M, Kark A, Hussain ST. Day-case inguinal hernia repair in the elderly: a surgical priority. *Hernia.* 2009; 13 (2): 131-6.
24. McGoldrick KE, Anesthesia Considerations for Geriatric Outpatients. In: Silverstein JH, Rooke GA,
25. Reves JG, McLeskey CH. Geriatric Anesthesiology Second Edition New York:Springer Science+Business Media, 2008: 322-37.

26. Hohener D, Blumenthal S, Borgeat A. Sedation and regional anaesthesia in the adult patient. *Br J Anaesth* . 2008; 100 (1): 8–16.
27. Bhananker SM, Posner KL, Cheney FW, Caplan RA, Lee RA, Domino KB. Injury and liability associated with Monitored Anaesthesia Care: ASA Closed Claims Analysis. *Anesthesiology*. 2006; 104 (2): 228–34.
28. Mora CT, Torjman M, White PF. Sedative and ventilatory effects of midazolam infusion: effect of flumazenil reversal. *Can J Anaesth* 1995;42: 677–84.
29. Rouiller M, Forster A, Gemperle M. Evaluation de l'efficacité et de la tolérance d'un antagoniste des benzodiazépines (Ro 15–1788). *Ann Fr Anesth Reanim* 1987;6: 1–6.
30. Kazema T, Takeuchi K, Ikeda K, et al. Optimal propofol plasma concentration during upper gastrointestinal endoscopy in young, middle-aged, and elderly patients. *Anesthesiology* 2000;93:662–69.
31. Shinozaki M, Usui Y, Yamaguchi S, et al. Recovery of psychomotor function after propofol sedation is prolonged in the elderly. *Can J Anaesth* 2002;49: 927–31.
32. Egan TD. The clinical pharmacology of the new fentanyl congeners. *Anesth Analg* 1997;84(Suppl):31–8.
33. Bailey PL, Egan TD, Stanley TH. Intravenous opioid anesthesia. In: Miller RD, ed. *Anesthesia*. 5th ed. Philadelphia: Churchill Livingstone; 2000: 273–6.
34. Egan TD. Remifentanyl pharmacokinetics and pharmacodynamics: a preliminary appraisal. *Clin Pharmacokinet* 1995;29: 80–94.
35. Minto CF, Schnider TW, Egan TD, et al. Influence of age and gender on the pharmacokinetics and pharmacodynamics of remifentanyl. *Anesthesiology* 1997;86: 10–23.
36. Egan TD, Huizinga B, Gupta SK, et al. Remifentanyl pharmacokinetics in obese versus lean patients. *Anesthesiology* 1998;89: 562–73.
37. Pagueron X, Boccara G, Bendahou M, Coriat P, Riou B. Brachial plexus nerve block exhibits prolonged duration in the elderly. *Anesthesiology* 2002;97: 1245–9.
38. Simon MJG, Veering BT, Stienstra R, van Kleek JW, Burm AGL. The effects of age on neural blockade and hemodynamic changes after epidural anesthesia with ropivacaine. *Anesth Analg* 2002;94:1325–30.
39. Eledjam JJ. Rachianesthe sie. *Encyclope die Me dico Chirurgicale* 1993;A10:36–324.
40. Heavner JE, Kaye AD, Lin BK, King T. Recovery of elderly patients from two or more hours of desflurane or sevoflurane anaesthesia. *Br J Anaesth*. 2003; 91 (4): 502–6.
41. Fredman B, Sheffer, Zohar E, et al. Fast track eligibility of geriatric patients undergoing short urologic procedures. *Anesth Analg* . 2002; 94(3): 560–4.
42. Nickalls RW, Mapleson WW. Age-related isoMAC charts for isoflurane, sevoflurane and desflurane in man. *Br J Anaesth* 2003;91: 170–4.
43. Iannuzzi E, Iannuzzi M, Viola G, Cerulli A, Cirillo V, Chiefari M. Desflurane and sevoflurane in elderly patients during general anesthesia: a double blind comparison. *Minerva Anesthesiol* 2005; 71: 147–55.
44. Culley DJ, Baxter MG, Crosby CA, Yukhanov R, Crosby G. Impaired acquisition of spatial memory 2 weeks after isoflurane and isoflurane-nitrous oxide anaesthesia in aged rats. *Anesth Analg*. 2004; 99 (5): 1393–7.

45. Eckenohoff RG, Johansson JS, Wei H, et al. Inhaled anesthetic enhancement of amyloid-beta oligomerization and cytotoxicity. *Anesthesiology*. 2004; 101 (3): 703–9.
46. Williams-Ruso P, Sharrock NE, Mattis S, Szatrowski TP, Charlson ME. Cognitive effects after epidural vs general anaesthesia in older adults: a randomized trial. *JAMA*. 1995; 274 (1): 44–50.
47. Heavner JE, Kaye AD, Lin BK, King T. Recovery of elderly patients from two or more hours of desflurane or sevoflurane anaesthesia. *Br J Anaesth*. 2003; 91 (4): 502–6.
48. Fredman B, Sheffer O, Zohar E, et al. Fast track eligibility of geriatric patients undergoing short urologic procedures. *Anesth Analg*. 2002; 94(3): 560–4.
49. Moller JT, Witttrup M, Johansen SH. Hypoxemia in the postanesthesia care unit: an observer study. *Anesthesiology* 1990;73: 890–9.
50. Arunasalam K, Davenport HT, Painter S, Jones JG. Ventilatory response to morphine in young and old subjects. *Anaesthesia* 1983;38: 529–33.
51. Pontoppidan H, Beecher HK. Progressive loss of protective reflexes in the airway with advance of age. *JAMA* 1960;174: 2209–13.
52. Seymour DG, Vaz FG. A prospective study of elderly general surgical patients. II. Postoperative complications. *Age Ageing*. 1989;18: 316–26.
53. Pedersen T, Viby-Mogensen J, Ringsted C. Anaesthetic practice and postoperative pulmonary complications. *Acta Anaesthesiol Scand*. 1992;36: 812–8.
54. Aviv JE. Effects of ageing on sensitivity of the pharyngeal and supraglottic areas. *Am J Med* 1997;103: 74–6.
55. Marik PE. Aspiration pneumonitis and aspiration pneumonia. *N Engl J Med*. 2001;344: 665–71.
56. De Larminat V, Montravers P, Dureuil B, Desmonts JM. Alteration in swallowing reflex after extubation in intensive care unit patients. *Crit Care Med* 1995;23: 486–90.
57. Hogue CW Jr, Lappas GD, Creswell LL, et al. Swallowing dysfunction after cardiac operations. Associated adverse outcomes and risk factors including intraoperative transesophageal echocardiography. *J Thorac Cardiovasc Surg* 1995;110: 517–22.
58. Mitchell CK, Smoger SH, Pfeifer MP, et al. Multivariate analysis of factors associated with postoperative pulmonary complications following general elective surgery. *Arch Surg* 1998;133:194–8.
59. Warner MA, Warner ME, Weber JG. Clinical significance of pulmonary aspiration during the perioperative period. *Anesthesiology* 1993;78: 56–62.
60. Cook DJ. Geriatric anesthesia. In: Solomon DH, LoCicero J III, Rosenthal RA, eds. *New Frontiers in Geriatric Research*. New York: American Geriatrics Society; 2004: 9–52.
61. Vaughan MS, Vaughan RW, Cork RC. Postoperative hypothermia in adults: relationship of age, anesthesia, and shivering to rewarming. *Anesth Analg* 1981;60: 746–51.
62. Leslie K, Sessler DI, Bjorksten AR, Moayeri A. Mild hypothermia alters propofol pharmacokinetics and increases the duration of action of atracurium. *Anesth Analg* 1995; 80: 1007–14.
63. Frank SM, Higgins MS, Breslow MJ, et al. The catecholamine, cortisol, and hemodynamic responses to mild perioperative hypothermia: a randomized clinical trial. *Anesthesiology* 1995;82: 83–93.

64. Beauregard L, Pomp A, Chinrie M. Severity and impact of pain after day surgery. *Can J Anaesth*. 1998; 45: 304–11.
65. Jones JS, Johnson K, McNinch M. Age as a risk factor for inadequate emergency department analgesia. *Am J Emerg Med* 1996;14: 157–60.
66. Petros JG, Alameddine F, Testa E, et al. Patient-controlled analgesia and postoperative urinary retention after hysterectomy for benign disease. *J Am Coll Surg* 1994;179: 663–7.
67. Petros JG, Mallen JK, Howe K, et al. Patient-controlled analgesia and postoperative urinary retention after open appendectomy. *Surg Gynecol Obstet* 1993;177: 172–5.
68. Carpenter RL, Abram SE, Bromage PR, Rauck RL. Consensus statement on acute pain management. *Reg Anesth* 1996;21: 152–6.
69. Carpenter RL. Gastrointestinal benefits of regional anesthesia/ analgesia. *Reg Anesth* 1996;21: 13–7.
70. Okkola KT, Hagelberg NM. Oxycodone: a new 'old' drug. *Curr Opin Anesthesiol*.2009; 22: 459–62.
71. Chung F. Are discharge criteria changing? *J Clin Anesth* 1993;5(Suppl):66.
72. Steward DJ. A simplified scoring system for the post-operative recovery room. *Can Anaesth Soc J* 1975;22: 111–3.
73. Aldrete, J. A. (1995). The post-anesthesia recovery score revisited. *Journal of Clinical Anesthesia*, 7, 89-91.
74. Chung F. Discharge criteria and post-discharge complications. *Refresher Course Lectures, 9th ESA Annual Meeting 2001, 7-17.*