Bölüm
23

PERİOPERATİF DÖNEMDE DİABETES MELLİTUS (DM) VAKASINA YAKLAŞIM ve YÖNETİM

Filiz MERCANTEPE[1]

GİRİŞ

DiabetesMellitus (DM), dünya üzerinde en yaygın görülen hastalıklardan birisidir(1). Diyabetli hastalar genel nedenler dışında artmış kardiyovasküler hastalık insidansı ve hastalığın sık görülen mikrovaskülerve makrovaskülerkomplikasyonları nedeniyle genel popülasyona oranla daha sık cerrahi müdahaleye gereksinim duyarlar(2). Cerrahi popülasyonda, hastaların %15'inde DM olduğu tahmin edilmektedir (3).

DM,perioperatifenfeksiyon riski ve postoperatif artmış kardiyovaskülermorbidite ve mortalite ile ilişkilidir. Kronik, glisemik kontrolü kötü olan diyabet hastalarının, sıkı glisemik kontrolü olan hastalarla karşılaştırıldığında cerrahi komplikasyon riskinin dört kat daha yüksek olduğu tahmin edilmektedir(4). Kan şekerindeki her 20 mg/dL'lik artış, cerrahi prosedürlerle ilişkili %30'luk bir komplikasyon artışına yol açar(5). Bunlar, gecikmiş yara iyileşmesi, derin doku enfeksiyonları, miyokardenfaktüsü, serebraliskemi, uzun hastane yatış süresi gibi morbiditehatta mortalitede artışa neden olan bir dizi komplikasyonları içerir(6).

Cerrahi prosedürler, anestezik işlemler, değişmiş beslenme düzeni, gıda alımının kesintiye uğraması, kusma gibi bir takım ek faktörleri içeren, katabolik hormonların artması, anabolik hormonların azalması ile bir dizi metabolik karışıklığa yol açarak normal glukoz metabolizmasını bozan bir stres durumudur. Cerrahi prosedürler ve anestezik işlemler kontrregülatör hormonları (katekolaminler, glukagon,kortizol) ve inflamatuarsitokinleri(IL-6, TNF-alfa) artırarak, artmış insülin direnci, azalmış insülin sekresyonu, azalmış glukoz kullanımı, artmış lipoliz, artmış proteoliz sonucu hiperglisemiyeve hatta ketozis gibi metabolik değişikliklere neden olur(7). Kontrregülatör hormon salınımının derecesi, bireyden

[1] Uzm. Dr.,Atatürk Üniversitesi Tıp Fakültesi, filizmercantepe@hotmail.com

KAYNAKLAR

1. Cosson E, Catargi B, Cheisson G, Jacqueminet S, Ichai C, Leguerrier A. Practical management of diabetes patients before , during and after surgery : A joint French diabetology and anaesthesiology position statement. Diabetes Metab [Internet]. 2018;44(3):200–16. Available from: https://doi.org/10.1016/j.diabet.2018.01.014
2. Plodkowski RA, Edelman S V. Pre-Surgical Evaluation of Diabetic Patients. Clin Diabetes. 2007;19(2):92–5.
3. Dhatariya K, Levy N, Kilvert A, Watson B, Cousins D, Flanagan D, et al. NHS Diabetes guideline for the perioperative management of the adult patient with diabetes. Diabet Med. 2012;29(4):420–33.
4. Jacqueminet S, Cosson E, Ichai C, Leguerrier A, Nicolescu-catargi B, Ouattara A, et al. Perioperative management of adult diabetic patients . Preoperative period. Anaesth Crit Care Pain Med. 2018;37:9–19.
5. Alexanian SM, McDonnell ME, Akhtar S. Creating a perioperative glycemic control program. Anesthesiol Res Pract. 2011;2011.
6. Furnary AP, Gao G, Grunkemeier GL, Wu YX, Zerr KJ, Bookin SO, et al. Continuous insulin infusion reduces mortality in patients with diabetes undergoing coronary artery bypass grafting. J Thorac Cardiovasc Surg. 2003;125(5):1007–21.
7. Esposito K, Nappo F, Marfella R, Giugliano G, Giugliano F, Ciotola M, et al. Inflammatory cytokine concentrations are acutely increased by hyperglycemia in humans: Role of oxidative stress. Circulation. 2002;106(16):2067–72.
8. Duggan EW, Carlson K, Umpierrez GE. Perioperative Hyperglycemia Management: An Update. Anesthesiology. 2018;126(3):547–60.
9. Endokrinoloji ve Metabolizma Derneği . TEMD Diabetes Mellitus ve Komplikasyonlarının Tanı, Tedavi ve izlem Kılavuzu-2019. First. Ankara; 2019. 268 p.
10. Frisch A, Chandra P, Smiley D, Peng L, Rizzo M, Gatcliffe C, et al. Prevalence and clinical outcome of hyperglycemia in the perioperative period in noncardiac surgery. Diabetes Care. 2010;33(8):1783–8.
11. Kwon S, Thompson R, Dellinger P et al. Importance of perioperative glycemic assessment, control in general surgery. Ann Surg. 2013;257(1):8–14.
12. Khan MA, Grinberg R, Johnson S, Afthinos JN, Gibbs KE. Perioperative risk factors for 30-day mortality after bariatric surgery: Is functional status important? Surg Endosc. 2013;27(5):1772–7.
13. Halkos ME, Puskas JD, Lattouf OM, Kilgo P, Kerendi F, Song HK, et al. Elevated preoperative hemoglobin A1c level is predictive of adverse events after coronary artery bypass surgery. J Thorac Cardiovasc Surg. 2008;136(3):631–40.
14. Trick WE, Scheckler WE, Tokars JI, Jones KC, Reppen ML, Smith EM, et al. Modifiable risk factors associated with deep sternal site infection after coronary artery bypass grafting. J Thorac Cardiovasc Surg. 2000;119(1):108–14.
15. Barker P, Creasey PE, Dhatariya K, Levy N, Lipp A, Nathanson MH, et al. Peri-operative management of the surgical patient with diabetes 2015: Association of Anaesthetists of Great Britain and Ireland. Anaesthesia. 2015;70(12):1427–40.
16. Cheng AYY, Lau DCW. The Canadian Diabetes Association 2013 Clinical Practice Guidelines-Raising the Bar and Setting Higher Standards! Can J Diabetes [Internet]. 2013;37(3):137–8. Available from: http://dx.doi.org/10.1016/j.jcjd.2013.04.005
17. Umpierrez GE, Hellman R, Korytkowski MT, Kosiborod M, Maynard GA, Montori VM, et al. Management of hyperglycemia in hospitalized patients in non-critical care setting: An endocrine society clinical practice guideline. J Clin Endocrinol Metab. 2012;97(1):16–38.
18. Buchleitner AM, Martínez-Alonso M, Hernández M, Solà I, Mauricio D. Perioperative glycaemic control for diabetic patients undergoing surgery. Cochrane Database Syst Rev. 2012;(9).
19. Joshi GP, Chung F, Vann MA, Ahmad S, Gan TJ, Goulson DT, et al. Society for ambulatory anesthesia consensus statement on perioperative blood glucose management in diabetic pa-

tients undergoing ambulatory surgery. Anesth Analg. 2010;111(6):1378–87.
20. Dhatariya K, Levy N, Kilvert A, Watson B, Cousins D, Flanagan D, et al. Diabetes UK Position Statements and Care Recommendations NHS Diabetes guideline for the perioperative management of the adult patient with diabetes *. Diabet Med. 2012;29:420–33.
21. Association TAD. 4. Lifestyle management: Standards of medical care in Diabetes 018. Diabetes Care. 2018;41(January):S38–50.
22. Investigators TN-SS. Intensive versus Conventional Glucose Control in Critically Ill Patients. N Engl J Med. 2009;360(13):1283–97.
23. Hirsch IB, McGill JB. Role of insulin in management of surgical patients with diabetes mellitus. Diabetes Care. 1990;13(9):980–91.
24. Peters A, Kerner W. Perioperative management of the diabetic patient A. Exp Clin Endocrinol Diabetes. 1995;103:213–8.
25. Metchick LN, Petit WA, Inzucchi SE. Inpatient Management of Diabetes Mellitus HOSPITAL BARRIERS TO GLUCOSE. Blood. 2002;9343(02):317–23.
26. Marks JB. Perioperative management of diabetes. Am Fam Physician. 2003;67(1):93–100.
27. Smiley DD, Umpierrez GE. Perioperative glucose control in the diabetic or nondiabetic patient. South Med J. 2006;99(6):580–9.
28. Watts N, Gebhart S, Clarck R, Philips L. Postoperative management of diabetes mellitus: Steady-state glucose control with bedside algorithm for insulin adjustment. Diabetes Care. 1987;10(6):722–8.
29. Pezzarossa A, Taddei F, Cimicchi MC. Perioperative Management of Diabetic Subjects. Diabetes Care. 1988;11(1).
30. Goldberg NJ, Wingert TD, Levin SR, Wilson SE, Viljoen JF. Insulin therapy in the diabetic surgical patient: Metabolic and hormone response to low dose insulin infusion. Diabetes Care. 1981;4(2):279–84.
31. Van den Berghe G, Wouters P, Weekers F, Verwaest C, Bruyninckx F. Intensive insülin therapy in critically patients. N Engl J Med [Internet]. 2001;345(19):1359–67. Available from: www.nejm.org
32. Hoogwerf B. Perioperative management of diabetes mellitus: how should we act on the limited evidence? Cleve Clin J Med. 2006;73(1):95–9.