

10. BÖLÜM

AĞRI TEDAVİSİ

Çile AKTAN¹
Didem AKÇALI²

ÖĞRENİM HEDEFLERİ

Bu bölüm sonunda okuyucu;

- Farmakolojik ağrı tedavisinin etkileri ve yan etkilerini tanımlayabilmeli,
- Girişimsel analjezi yöntemlerini sıralayabilmeli,
- Cerrahi analjezi yöntemlerini ve uygulandığı hasta gruplarını açıklayabilmeli.

GİRİŞ

Her türden kronik ağrı, yalnızca hastaların ıstırabından sorumlu değildir, aynı zamanda toplum için önemli maliyetlere de sebep olur. Acı miktarı ölçülemezse de, yalnızca Amerika Birleşik Devletleri'ndeki ekonomik ağrı yükünün sağlık hizmetlerinde yılda 650 milyar dolar olduğu ve üretkenlik kaybı olduğu tahmin edilmektedir. Ağrı, genellikle doku hasarının meydana geldiğini gösteren çok sayıda tıbbi sorunun ortak bir semptomudur. Ağrı hoş olmasa da, aynı zamanda iyileşmeyi teşvik etmek için yararlı bir mekanizmadır; hastayı etkilenen bölgeyi dinlendirmeye ve tıbbi yardım aramaya zorlar.

¹ Uzm. Dr., Gazi Üniversitesi Tıp Fakültesi, Algoloji BD

² Prof. Dr., Gazi Üniversitesi Tıp Fakültesi, Algoloji BD

Ağrının azalması için 3 ay beklenir. İlk yanıt %70'tir; 3 yılda %50'ye düşer. Medikal tedavinin bazen devamı gerekir. Atipik TN hastalarında medikal tedavi tercih edilir .⁵⁹⁻⁶¹

10.3.11 Motor korteks uyarılması (MCS): Motor korteks uyarılması, santral ağrılarda, ağrılı trigeminal nöropatide ve inme sonrası ağrılarda yeni ve ümit verici bir tedavidir (38). Deafferantasyon ağrısında da, motor korteks uyarılması yanı sıra temporal manyetik uyarılma (rTMS) ve dorsal kolon uyarılması (tDCS) uygulanabilir .⁶²

10.3.12 Derin beyin uyarılması (DBS): Nöropatik ağrı, inme sonrasındaki gibi beyin lezyonuna veya trigeminal lezyona bağlıysa derin beyin uyarılması (DBS) kullanılır.

ÖZETLE,

Ağrı tedavi yöntemleri çeşitli olsa ve zamanla değişiklik gösterse de, ağrı çekmenin çok zor olduğu, ağrı tedavisinin insanlık hakkı olduğu hep geçerlidir. Her tedavide olduğu gibi hastaya zarar vermemek en önemli prensiptir. Bunun yanında ağrı tedavisinin kanser hastalarında ve akut ağrılarda acil bir gereksinim olduğu da akılda tutulmalıdır.

Ağrı tedavisi her hastanın özelinde hastalığına, tıbbi geçmişine göre bireysel olarak planlanmalı, uygulamada hastanın tedaviye katılması, ağrının tekrar değerlendirilmesi, yan etkilerle mücadele ihmal edilmemelidir. Tedavi yöntemlerinin hangisi uygulanırsa uygulansın hastaya fayda sağlamayan, yaşam kalitesini arttırmayan tedavilerin terkedilmesi esastır.

Hekimlerden daha fazla hastayla zaman geçiren hemşirelerin de bu ekipte rolü çok önemlidir. Ağrılı hastaya yaklaşımları hastanın yaşam kalitesine katkı sağlamaktadır. Ağrı tedavisinde görev alan sağlık çalışanlarının hasta memnuniyeti ve ağrısının giderilmesinden aldıkları haz, ekibin motivasyonu ve gelişiminde oldukça önemlidir.

KAYNAKLAR

1. Brown MA. The role of nurses in pain and palliative care. *J Pain Palliat Care Pharmacother.* 2013;27(3):300-2.
2. WHO's cancer pain ladder for adults. WHO. 2013; <http://www.who.int/cancer/palliative/painladder/en/>. Accessed 30 Nov 2015.
3. Rang H, Dale M, Ritter J, Flower R, Henderson G Rang & Dale's Pharmacology, 7th ed. Elsevier, London, 2012.
4. Vane JR, Bakhle YS, Botting RM Cyclooxygenases 1 and 2. *Annu Rev Pharmacol Toxicol.* 1998; 38:97-120.
5. Silverstein F, Faich G, Goldstein J Gastrointestinal toxicity with celecoxib vs nonsteroidal anti-inflammatory drugs for osteoarthritis and rheumatoid arthritis: the CLASS study: a randomized. *JAMA.* 2000; 284:1247-1255.

6. Ennis ZN, Dideriksen D, Vaegter HB, Handberg G, Pottegård A. Acetaminophen for Chronic Pain: A Systematic Review on Efficacy. *Basic Clin Pharmacol Toxicol.* 2016;118(3):184-9.
7. Barbagallo M, Sacerdote P. Ibuprofen in the treatment of children's inflammatory pain: a clinical and pharmacological overview. *Minerva Pediatr.* 2019;71(1):82-99.
8. Gaertner J, Stamer UM, Remi C, Voltz R, Bausewein C, Sabatowski R, Wirz S, Müller-Mundt G, Simon ST, Pralong A, Nauck F, Follmann M, Radbruch L, Meißner W. Metamizole/dipyrone for the relief of cancer pain: A systematic review and evidence-based recommendations for clinical practice. *Palliat Med.* 2017;31(1):26-34.
9. Konijnenbelt-Peters J, van der Heijden C, Ekhart C, Bos J, Bruhn J, Kramers C. Metamizole (Dipyrone) as an Alternative Agent in Postoperative Analgesia in Patients with Contraindications for Nonsteroidal Anti-Inflammatory Drugs. *Pain Pract.* 2017;17(3):402-408.
10. Solomon DH, Rassen JA, Glynn RJ, Garneau K, Levin R, Lee J, Schneeweiss S The comparative safety of opioids for nonmalignant pain in older adults. *Arch Intern Med.* 2010; 170:1979– 1986.
11. Tobias JD, Green TP, Coté CJ. Codeine: time to say “no.” *Pediatrics.* 2016;138(4) e20162396.
12. Subedi M, Bajaj S, Kumar MS, Yc M. An overview of tramadol and its usage in pain management and future perspective. *Biomed Pharmacother.* 2019;111:443-451.
13. <https://titck.gov.tr/storage/Archive/2018/dynamicModulesAttachment/b39ffe7a-ce-c9-47df-89f5-833bea3ce3f6.pdf>
14. Kalso E, Edwards JE, Moore RA, McQuay HJ Opioids in chronic non-cancer pain: systematic review of efficacy and safety. *Pain.* 2004; 112:372–380
15. Pergolizzi J, Aloisi AM, Dahan A, Filitz J, Langford R, Likar R, Mercadante S, Morlion B, Raffa RB, Sabatowski R, Sacerdote P, Torres LM, Weinbroum AA Current Knowledge of Buprenorphine and Its Unique Pharmacological Profile. *Pain Pract.* 2010;10:428–450.
16. Grape S, Schug SA, Lauer S, Schug BS. Formulations of fentanyl for the management of pain. *Drugs.* 2010; 70:57–72.
17. <https://pdf.ilacprospektusu.com/6809-durogesic-25-mcg-saat-transdermal-flaster-kt.pdf>
18. Ching Wong SS, Cheung CW. Analgesic Efficacy and Adverse Effects of Meperidine in Managing Postoperative or Labor Pain: A Narrative Review of Randomized Controlled Trials. *Pain Physician.* 2020;23(2):175-201.
19. Schlick KH, Hemmen TM, Lyden PD. Seizures and Meperidine: Overstated and Underutilized. *Ther Hypothermia Temp Manag.* 2015;5(4):223-7.
20. Kara İ, Çiçekçi F. Multimodal Analgesia. *Türkiye Klinikleri J Anest Reanim-Special Topics.* 2017;10(2):150-3.
21. Erdine S. Ağrı. İstanbul: Nobel Matbaacılık; 2002; 144-53.
22. Akkaya T. Akut ağrılı hastaya yaklaşım. İçinde: Keçik Y, editör. *Temel Anestezi.* Ankara: Güneş Tıp Kitabevleri; 2012;1005-20
23. Erdine S. PCA (Patient Controlled Analgesia). Ağrı. 3. Baskı. İstanbul: Nobel Tıp Kitabevleri; 2007; 188-97
24. Uysal HY, Acar HV, Kaya A, Ceyhan A. Postoperatif ağrı tedavisinde uygulanan hasta-kontrollü analjezi yöntemlerinin retrospektif incelemesi. *J Clin Exp Invest.* 2013; 4(2): 159-65.
25. Lindley P, Pestano CR, Gargiulo K. Comparison of postoperative pain management using two patient controlled analgesia methods: nursing perspective. *J Adv Nurs.* 2009;65(7):1370-80.
26. Dworkin RH, O'Connor AB, Backonja M, Farrar JT, Finnerup NB, Jensen TS, Kalso EA, Loeser JD, Miaskowski C, Nurmiikko TJ, Portenoy RK, Rice ASC, Stacey BR, Treede R-D, Turk DC, Wallace MS. Pharmacologic management of neuropathic pain: evidence-based recommendations. *Pain.* 2007;132:237–251.
27. Campbell BJ, Rowbotham M, Davies PS, Jacob P, Benowitz NL. Systemic absorption of topical lidocaine in normal volunteers, patients with post-herpetic neuralgia, and patients with acute herpes zoster. *J Pharm Sci.* 2002; 91:1343–1350.

28. Turnbull A (1850) Tincture of capsaicin as a remedy for chilblains and toothache. Dublin Free Press, Dublin, pp 95–96.
29. Anand P, Bley K. Topical capsaicin for pain management: therapeutic potential and mechanisms of action of the new high-concentration capsaicin 8 patch. *Br J Anaesth.* 2012; 107:490–502.
30. Goldenberg DL, Burckhardt C, Crofford L (2014) *Manag Fibromyalgia Syndr* 292:2388–2395
31. Micó JA, Ardid D, Berrocoso E, Eschalier A. Antidepressants and pain. *Trends Pharmacol Sci* 2006; 27:348–354.
32. Arnold LM, Keck PEJ, Welge JA. Antidepressant treatment of fibromyalgia. A meta-analysis and review. *Psychosomatics.* 2000; 41:104–113.
33. Watson CPN, Chipman ML, Monks RC. Antidepressant analgesics: a systematic review and comparative study. In: McMahon S, Koltzenburg M (eds) *Wall Melzack's Textb. Pain*, 5th ed. Elsevier, London, 2006; 1280.
34. Crofford LJ, Mease PJ, Simpson SL, Young JP, Martin SA, Haig GM, Sharma U. Fibromyalgia relapse evaluation and efficacy for durability of meaningful relief (FREEDOM): a 6-month, double-blind, placebo-controlled trial with pregabalin. *Pain.* 2008; 136:419–431.
35. Hylands-White N, Duarte RV, Raphael JH. An overview of treatment approaches for chronic pain management. *Rheumatol Int.* 2017;37(1):29-42.
36. Kim CH, Park JW. Trigger point injection for myofascial pain syndrome. *J Korean Orthop Ultrasound Soc.* 2014;7 Suppl 2:127–31.
37. Robbins MS, Kuruvilla D, Blumenfeld A, Charleston L, Sorrell M, Robertson CE, Grosberg BM, Bender SD, Napchan U, Ashkenazi A. Peripheral Nerve Blocks and Other Interventional Procedure Special Interest Section of the American Headache Society. Trigger point injections for headache disorders: expert consensus methodology and narrative review. *Headache.* 2014;54(9): 1441-59.
38. Geurts JW, van Wijk RM, Stolker RJ, Groen GJ. Efficacy of radiofrequency procedures for the treatment of spinal pain: a systematic review of randomized clinical trials. *Reg Anesth Pain Med.* 2001; 26:394–400.
39. Schofferman J, Kine G. Effectiveness of repeated radiofrequency neurotomy for lumbar facet pain. *Spine (Phila Pa 1976).* 2004;29:2471–2473.
40. Gazi Üniversitesi Algoloji arşiv.
41. Watts RW, Silagy CA. A meta-analysis on the efficacy of epidural corticosteroids in the treatment of sciatica. *Anaesth Intensive Care.* 1995; 23:564–569.
42. Levy R, Salzman D. Implanted drug delivery systems for control of chronic pain. In: North R, Levy R (eds) *Neurosurg. Manag. Pain.* Springer, New York, 1997; 302–324.
43. Prager J. Neuraxial medication delivery: the development and maturity of a concept for treating chronic pain of spinal origin. *Spine (Phila Pa 1976).* 2002; 27:2593–2605.
44. Follett KA, Boortz-Marx RL, Drake JM, et al: Prevention and management of intrathecal drug delivery and spinal cord stimulation system infections. *Anesthesiology.*2004; 100:1582– 1594.
45. Turner JA, Sears JM, Loeser JD: Programmable intrathecal opioid delivery systems for chronic non-cancer pain: A systematic review of effectiveness and complications. *Clin J Pain.* 2007; 23:180–195.
46. Nagel SJ, Reddy CG, Frizon LA, Holland MT, Machado AG, Gillies GT, Howard MA 3rd. Intrathecal Therapeutics: Device Design, Access Methods, and Complication Mitigation. *Neuromodulation.* 2018 Oct;21(7):625-640
47. J Siegfried, A Kühner, V Sturm. Neurosurgical treatment of cancer pain. *Review Recent Results Cancer Res.* 1984;89:148-56.
48. Burchiel KJ, Raslan AM. Contemporary concepts of pain surgery. *J Neurosurg.* 2019; 130(4):1039-1049.

49. Raslan AM, Burchiel KJ. Neurosurgical Advances in Cancer Pain Management. *Curr Pain Headache Rep.* 2010; 14:477–482.
50. Viswanathan A, Bruera E. Cordotomy for treatment of cancer-related pain: patient selection and intervention timing. *Neurosurg Focus.* 2013;35(3):E6.
51. Yegul I, Erhan E. Bilateral CT-guided percutaneous cordotomy for cancer pain relief. *Clin Radiol.* 2003;58(11):886-9.
52. Meyerson BA. Neurosurgical approaches to pain treatment. *Acta Anaesthesiol Scand.* 2001;45(9):1108-13.
53. Kanpolat Y. Percutaneous destructive pain procedures on the upper spinal cord and brain stem in cancer pain: CT-guided techniques, indications and results. *Adv Tech Stand Neurosurg.* 2007;32:147-73.
54. Raffa RB, Pergolizzi JV Jr. Intracerebroventricular opioids for intractable pain. *Br J Clin Pharmacol.* 2012;74(1):34-41.
55. Linderoth B, Foreman RD. Physiology of spinal cord stimulation: review and update. *Neuro-modulation* 1999; 2:150–164.
56. Wu M, Linderoth B, Foreman RD. Putative mechanisms behind effects of spinal cord stimulation on vascular diseases: a review of experimental studies. *Auton Neurosci.* 2008; 138:9–23.
57. Nizard J, Raoul S, Nguyen JP, Lefaucheur JP. Invasive stimulation therapies for the treatment of refractory pain. *Discov Med.* 2012;14(77):237-46.
58. NICE (2008) Spinal cord stimulation for chronic pain of neuropathic or ischaemic origin. In: NICE Technol. Apprais. Guid. [TA159]. <http://www.nice.org.uk/guidance/ta159/>. Accessed 26 Nov 2015.
59. Franzini A, Moosa S, D'Ammando A, Bono B, Scheitler-Ring K, Ferroli P, Messina G, Prada F, Franzini A. The neurosurgical treatment of craniofacial pain syndromes: current surgical indications and techniques. *Neurol Sci.* 2019;40 (Suppl 1):159-168.
60. Wael Fouad. Management of trigeminal neuralgia by radiofrequency thermocoagulation, *Alexandria Journal of Medicine*, 2011; 47:1, 79-86.
61. Tai AX, Nayar VV. Update on Trigeminal Neuralgia. *Curr Treat Options Neurol.* 2019; 21(9):42.
62. Hussein AE, Esfahani DR, Moissak GI, Rzaev JA, Slavin KV. Motor Cortex Stimulation for Deafferentation Pain. *Curr Pain Headache Rep.* 2018;22(6):45.