BÖLÜM 27

BAŞ AĞRISI TEDAVİSİNDE PERİFERİK SİNİR BLOKAJLARI

Burcu KARPUZ SEREN[1]
Esra ACIMAN DEMİREL[2]

GİRİŞ

Günümüzde medikal tedavilerin yetersiz kaldığı primer ve sekonder baş ağrılarında periferal sinir blokajları uygulanmaktadır. En yaygın uygulama ise büyük oksipital sinir (GON) blokajı olup bunun dışında küçük okspital sinir (LON), supraorbital sinir, infraorbital sinir, aurikülotemporal sinir, mental sinir ve sfenopalatin gangliyon blokajı gibi uygulamalar mevcuttur. Periferik sinir blokları baş ağrısında hem akut hem de koruyucu tedavi için kullanılmaktadır.

Güvenli ve etkili tedavi yöntemleri olup uzun süreli ağrının azaltılmasını sağlayabilirler. Bunun sebebinin santral ağrı modülasyonu olduğu düşünülmektedir. Periferik sinir blokajının etkinliğinde trigeminovasküler sistemin rol oynadığı düşünülmektedir (1).

Periferik sinir blokajı kullandığı ilaçlarla tedavi sağlayamayan ya da ilaç kullanmak istemeyen hastalar için bir seçenek olabilir. Periferik sinir blokajı ilaç aşırı kullanımı Baş ağrısı akut tedavisi için kullanılabilir, çocuklar ve hamileler için güvenlidir (2). Böbrek ve karaciğer hastalıkları gibi ilaç kullanmaktan kaçınması gereken hastalarda da güvenli bir tedavi yöntemidir.

[1] Uzm. Dr., Zonguldak Atatürk Devlet Hastanesi Nöroloji Kliniği, burcukarpuz@outlook.com
[2] Dr. Öğr. Üyesi, Zonguldak Bülent Ecevit Üniversitesi, Tıp Fakültesi, Nöroloji AD., esraaciman@yahoo.com

KAYNAKLAR

1. Karadaş Ö. (2019). The Role of Other Peripheral Nerve Blocks. . Özge A. UD, Karadaş Ö., Bolay H. (Ed). *Peripheral Interventional Management in Headache* (s.35-43). Cham: Springer
2. Govindappagari S, Grossman TB, Dayal AK. Peripheral nerve blocks in the treatment of migraine in pregnancy. *Obstetrics and gynecology*. 2014;124(6):1169-74.
3. Kemp WJ, Tubbs RS, Cohen-Gadol AA. The innervation of the scalp: A comprehensive review including anatomy, pathology, and neurosurgical correlates. *Surgical neurology international*. 2011;2:178.
4. Natsis K, Baraliakos X, Appell HJ. The course of the greater occipital nerve in the suboccipital region: a proposal for setting landmarks for local anesthesia in patients with occipital neuralgia. *Clinical anatomy (New York, NY)*. 2006;19(4):332-6.
5. Blumenfeld A, Ashkenazi A, Evans RW. Occipital and trigeminal nerve blocks for migraine. *Headache.* 2015;55(5):682-9.
6. Greher M, Moriggl B, Curatolo M. Sonographic visualization and ultrasound-guided blockade of the greater occipital nerve: a comparison of two selective techniques confirmed by anatomical dissection. *British journal of anaesthesia.* 2010;104(5):637-42.
7. Palamar D, Uluduz D, Saip S. Ultrasound-guided greater occipital nerve block: an efficient technique in chronic refractory migraine without aura? *Pain physician.* 2015;18(2):153-62.
8. May A, Goadsby PJ. The trigeminovascular system in humans: pathophysiologic implications for primary headache syndromes of the neural influences on the cerebral circulation. *Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism*. 1999;19(2):115-27.
9. Tepe N, Tertemiz OF. Comparison of greater occipital nerve and greater occipital nerve + supraorbital nerve block effect in chronic medication overuse headache. *Turkish journal of medical sciences.* 2021;51(3):1065-70.
10. Chowdhury D, Datta D, Mundra A. Role of Greater Occipital Nerve Block in Headache Disorders: A Narrative Review. *Neurology India*. 2021;69(Supplement):S228-s56.
11. Niraj G, Kelkar A, Girotra V. Greater occipital nerve block for postdural puncture headache (PDPH): a prospective audit of a modified guideline for the management of PDPH and review of the literature. *Journal of clinical anesthesia*. 2014;26(7):539-44.
12. Karaoğlan M, Durmuş İ E, Küçükçay B. Comparison of the clinical efficacy of bilateral and unilateral GON blockade at the C2 level in chronic migraine. *Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology.* 2021.
13. Ünal-Artık HA, İnan LE, Ataç-Uçar C. Do bilateral and unilateral greater occipital nerve block effectiveness differ in chronic migraine patients? *Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology.* 2017;38(6):949-54.
14. Ashkenazi A, Young WB. The effects of greater occipital nerve block and trigger point injection on brush allodynia and pain in migraine. *Headache*. 2005;45(4):350-4.
15. Ashkenazi A, Blumenfeld A, Napchan U, Narouze S, Grosberg B, Nett R, et al. Peripheral nerve blocks and trigger point injections in headache management - a systematic review and suggestions for future research. *Headache*. 2010;50(6):943-52.
16. Korucu O, Dagar S, Çorbacioglu Ş K. The effectiveness of greater occipital nerve blocka-

de in treating acute migraine-related headaches in emergency departments. *Acta Neurol Scand*. 2018;138(3):212-8.
17. Cuadrado ML, Aledo-Serrano Á, López-Ruiz P, Gutiérrez-Viedma Á. Greater occipital nerve block for the acute treatment of prolonged or persistent migraine aura. *Cephalalgia : an international journal of headache.* 2017;37(8):812-8.
18. Allen SM, Mookadam F, Cha SS, Freeman JA. Greater Occipital Nerve Block for Acute Treatment of Migraine Headache: A Large Retrospective Cohort Study. *Journal of the American Board of Family Medicine : JABFM*. 2018;31(2):211-8.
19. Inan LE, Inan N, Unal-Artık HA. Greater occipital nerve block in migraine prophylaxis: Narrative review. *Cephalalgia : an international journal of headache*. 2019;39(7):908-20.
20. Young WB. Blocking the greater occipital nerve: utility in headache management. *Current pain and headache reports.* 2010;14(5):404-8.
21. Edwards AE, Bowsher GM, Deepak S. Improving local anaesthetic systemic toxicity (LAST) awareness in maternity care using tailored educational tools. *BMJ open quality*. 2018;7(2):e000070.
22. Ashkenazi A, Matro R, Shaw JW. Greater occipital nerve block using local anaesthetics alone or with triamcinolone for transformed migraine: a randomised comparative study. *Journal of neurology, neurosurgery, and psychiatry*. 2008;79(4):415-7.
23. Gönen M, Balgetir F, Aytaç E. Suboccipital steroid injection alone as a preventive treatment for cluster headache. *Journal of clinical neuroscience : official journal of the Neurosurgical Society of Australasia*. 2019;68:140-5.
24. Lambru G, Lagrata S, Matharu MS. Cutaneous atrophy and alopecia after greater occipital nerve injection using triamcinolone. *Headache*. 2012;52(10):1596-9.
25. Levin M. Nerve blocks in the treatment of headache. Neurotherapeutics : the journal of the American Society for Experimental *NeuroTherapeutics.* 2010;7(2):197-203.
26. R. T. Auriculotemporal Nerve Block. In: Pope J. DTe, editor. Treatment of Chronic Pain Conditions. *NY. : Springer, New York*; 2017.
27. Bilim S TM. Baş ve boyun bölgesinde nadir görülen ağrı sendromları. *Ağrı*. 2021;2:1-7.
28. Blumenfeld A, Ashkenazi A, Napchan U. Expert consensus recommendations for the performance of peripheral nerve blocks for headaches--a narrative review. *Headache.* 2013;53(3):437-46.
29. Khonsary S, Ma Q, Villablanca J. Clinical functional anatomy of the pterygopalatine ganglion, cephalgia and related dysautonomias: A review. *Surgical neurology international.* 2013;4:S422-S8.
30. Rusu MC, Pop F. The anatomy of the sympathetic pathway through the pterygopalatine fossa in humans. *Annals of anatomy = Anatomischer Anzeiger : official organ of the Anatomische Gesellschaft.* 2010;192(1):17-22.
31. Robbins MS, Robertson CE, Kaplan E. The Sphenopalatine Ganglion: Anatomy, Pathophysiology, and Therapeutic Targeting in Headache. *Headache.* 2016;56(2):240-58.
32. Oluigbo CO, Makonnen G, Narouze S. Sphenopalatine ganglion interventions: technical aspects and application. *Progress in neurological surgery.* 2011;24:171-9.
33. Vallejo R, Benyamin R, Yousuf N. Computed tomography-enhanced sphenopalatine ganglion blockade. *Pain practice : the official journal of World Institute of Pain.* 2007;7(1):44-6.
34. Narouze S HM, Benzon H. (2011). *Interventional and Neuromodulatory Techniques for Pain Management Spinal injections and peripheral nerve blocks* (1st edition). Philedephia: Elsevier
35. Yaghoubian JM (2022). *Supertrochlear Nerve Block.* Treasure Island: StatPearls

36. Hokenek NM, Ozer D, Yılmaz E. Comparison of greater occipital nerve and supra orbital nerve blocks methods in the treatment of acute migraine attack: A randomized double-blind controlled trial. *Clinical neurology and neurosurgery*. 2021;207:106821.
37. Aciman Demirel E, Karpuz B, Ozdemir S. Effectiveness of greater occipital nerve blocks in chronic migraine. *Journal of Surgery and Medicine.* 2021;5(6):593-6.
38. Mojica J, Mo B, Ng A. Sphenopalatine Ganglion Block in the Management of Chronic Headaches. *Current pain and headache report*s. 2017;21(6):27.
39. Binfalah M, Alghawi E, Shosha E. Sphenopalatine Ganglion Block for the Treatment of Acute Migraine Headache. *Pain Research and Treatment*. 2018;2018:2516953.
40. Taylor A. (2021) *Supraorbital Nerve Block.* Treasure Island: StatPearls.
41. Özer D, Bölük C, Türk Börü Ü. Greater occipital and supraorbital nerve blockade for the preventive treatment of migraine: a single-blind, randomized, placebo-controlled study. *Current Medical Research and Opinion.* 2019;35(5):909-15.
42. Ornello R, Lambru G, Caponnetto V. Efficacy and safety of greater occipital nerve block for the treatment of cluster headache: a systematic review and meta-analysis. *Expert review of neurotherapeutics*. 2020;20(11):1157-67.
43. Lambru G, Abu Bakar N, Stahlhut L. Greater occipital nerve blocks in chronic cluster headache: a prospective open-label study. *European journal of neurology*. 2014;21(2):338-43.
44. Busch V, Jakob W, Juergens T. Occipital nerve blockade in chronic cluster headache patients and functional connectivity between trigeminal and occipital nerves. *Cephalalgia : an international journal of headache.* 2007;27(11):1206-14.
45. Mojica J, Mo B, Ng A. Correction to: Sphenopalatine Ganglion Block in the Management of Chronic Headaches. *Current pain and headache reports.* 2017;21(12):53.
46. Karadaş Ö, Özön A, Özçelik F. Greater occipital nerve block in the treatment of triptan-overuse headache: A randomized comparative study. *Acta Neurol Scand.* 2017;135(4):426-33.
47. Arab A, Khoshbin M, Karimi E. Effects of greater occipital nerve block with local anesthetic and triamcinolone for treatment of medication overuse headache: an open-label, parallel, randomized, controlled clinical trial. *Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology*. 2022;43(1):549-57.
48. Nair AS, Kodisharapu PK, Anne P. Efficacy of bilateral greater occipital nerve block in postdural puncture headache: a narrative review. *The Korean journal of pain*. 2018;31(2):80-6.
49. Chang YJ, Hung KC, Chen IW. Efficacy of greater occipital nerve block for pain relief in patients with postdural puncture headache: A meta-analysis. *Medicine.* 2021;100(51):e28438.
50. Nair AS, Rayani BK. Sphenopalatine ganglion block for relieving postdural puncture headache: technique and mechanism of action of block with a narrative review of efficacy. *The Korean journal of pain.* 2017;30(2):93-7.
51. Kent S, Mehaffey G. Transnasal sphenopalatine ganglion block for the treatment of postdural puncture headache in obstetric patients. *Journal of clinical anesthesia.* 2016;34:194-6.
52. The International Classification of Headache Disorders, 3rd edition (beta version). *Cephalalgia : an international journal of headache*. 2013;33(9):629-808.
53. Choi I, Jeon SR. Neuralgias of the Head: Occipital Neuralgia. *Journal of Korean medical science*. 2016;31(4):479-88.
54. Kuhn WF, Kuhn SC, Gilberstadt H. Occipital neuralgias: clinical recognition of a comp-

licated headache. A case series and literature review. *Journal of orofacial pain*. 1997;11(2):158-65.

55. Seo HJ, Park CK, Choi MK. Clinical Outcome of Percutaneous Trigeminal Nerve Block in Elderly Patients in Outpatient Clinics. *Journal of Korean Neurosurgical Society*. 2020;63(6):814-20.