

BEL AĞRILARINDA LUMBAR EPİDURAL STEROİD VE HİPERTONİK SALİN UYGULAMALARI: RETROSPEKTİF İNCELEME SONUÇLARI

S. Özyalçın(*), A. Yücel(**), S. Erdine(***)

ÖZET

Bu çalışmada lokal anestetik (LA), kortikosteroid (KS) ve hipertonic salin (HS) kombinasyonunun epidural uygulanmasının bel ağrılı hastalarda etkinliği irdelenmiştir.

Araştırmaya yaşları 24 - 68 arasında (ortalama: 48.8 ± 10.9) 53 erkek, 37 kadın 90 olgu dahil edilmiştir. Hastalarda gerekli nörolojik ve radyolojik incelemeler yapılmıştır. 16 G R-K iğnesi ile sakral hiatustan epidural aralığa girilerek epidurografik inceleme için 10 ml kontrast madde verilmiştir. Epidural aralıkta dolma defektleriyle adhezyon alanları görüntülenmiştir. Daha sonra Racz kateter adhezyon saptanan alana yerleştirilerek tekrar opak madde injekte edilmiştir (çift-kontrast). Tedavi amacıyla önce 10 ml içinde 80 mg metilprednizolon - serum fizyolojik kombinasyonu verilmiştir. Epidural hipertonic salinin yolaçacağı ağrıyı önlemek için önce 14 ml % 0.25 bupivakain, 30 dakika sonra ise % 10 hipertonic salin yavaş olarak injekte edilmiştir.

Hastalar 6 ay süre ile poliklinikten veya telefon takibi ile izlenmişlerdir. VAS değerleri her ay kaydedilmiş ve 2. ay, 4. ay, 6. ay sonuçları karşılaştırılmıştır. 6 ayın sonunda tedavinin etkisinin çokiyi, iyi, orta ve etkisiz olması ile ağrılı semptomlarının süresine göre dağılımları da değerlendirilmiştir. Opioid ilaç kullanımı, iş ve günlük yaşam aktivitelerindeki kısıtlamalar da 6. ayın sonunda tedavi öncesiyle karşılaştırılmıştır. VAS değerlerinde anlamlı azalma saptanmıştır. Hastaların çoğunda etkili ağrı kontrolü sağlanmıştır. Komplikasyon olarak 3 hastada dura delinmesi (%3.3), 9 hastada geçici parestezi (%10) ve 1 hastada (%1.1) girişim yerinde infeksiyon gözlenmiştir.

Sonuç olarak yöntemin konvansiyonel tedavi uygulamalarından fayda görmeyen hastalar için etkili ve güvenli olduğu kanısına varılmıştır.

Anahtar kelimeler: Bel ağrısı, epidurografi, lokal anestetik, kortikosteroid, hipertonic salin

SUMMARY

EPIDURAL LOCAL ANESTHETIC, CORTICOSTEROID AND HYPERTONIC SALINE INJECTION IN THE TREATMENT OF LOW BACK PAIN: A RETROSPECTIVE FOLLOW UP

In this study the efficacy of a mixture of local anesthetic, corticosteroid and hypertonic saline (LA, CS, HS) administered epidurally was evaluated.

Ninety patients (53 males, 37 females, ages 24-68, mean 48.8±10.9 yrs) suffering from low back pain were included. The patients were placed in prone position on a fluoroscopy table and the caudal region was prepared and draped. 16 G R-K needle was inserted through the sacral hiatus to the epidural space. The filling defect in the epidural space (epidural scar) was identified under the fluoroscopy by means of epidurography (contrast material 10 ml iohexol). Then a flexible tipped epidural catheter was advanced toward this area and additional contrast dye was injected through the catheter. At first a 10 ml solution of 8 ml saline + 2 ml (80 mg) methylprednisolone was given. A 14 ml of 0.25 % bupivacaine was injected. After thirty minutes 12 ml of 10 % NaCl was administered slowly. Hypertonic saline injection was repeated daily for the next two days in the same manner.

The patients were followed monthly for 6 months. VAS values were evaluated. Also the quality of pain relief (as excellent, good, moderate, poor), opioid use, back to work and daily activity at the end of 6 months were evaluated.

VAS values were decreased significantly after the procedures. Most of the patients had significant pain relief. Dura puncture in 3 patient (3.3 %), infection of the entrance of the catheter in one patient (1.1 %), and temporary paresthesia in the affected site in 9 patients (10 %) were observed.

We conclude that this application of pain therapy seems to be effective and safe method particularly in the patients who have not had any benefit from the other conventional therapies.

Key words: Low back pain, epidurography, local anesthetic, corticosteroid, hypertonic saline

(*) İ.Ü. İstanbul Tıp Fakültesi, Algoloji Bilim Dalı, Uzm.Dr.

(**) İ.Ü. İstanbul Tıp Fakültesi, Algoloji Bilim Dalı, Doç.Dr.

(***) İ.Ü. İstanbul Tıp Fakültesi, Algoloji Bilim Dalı Başkanı, Prof.Dr.

Yazışma adresi:

Dr. Süleyman Özyalçın, İst. Üniv., İst. Tıp.Fak., Algoloji Bilim Dalı, Monoblok, 34390 Çapa-İstanbul.

Author's address:

Süleyman Özyalçın MD., Dept. of Algology, İstanbul Medical Faculty of İstanbul University, Monoblok, 34390 Çapa-İstanbul-Turkey.

KAYNAKLAR

1. Abram S. E., O'Connor T. C.: Complications associated with epidural steroid injections. *Reg. Anesth.*, 21(2): 149-162, 1996.
2. Arthur J., Racz G.B., Heinrich R., Diede J., McCann M., Wilson E., Heavner J.E.: Epidural space: identification of filling defects and lysis of adhesions in the treatment of chronic painful conditions. Abstracts, 7th World Congress on Pain, IASP: 557, 1993.
3. Barsa J.E., Charlton J.E.: Diagnosis of epidural scarring and its possible contribution to chronic low back pain syndrome. *Pain*, S4:S376, 1984.
4. Benson H.T.: Review article: Epidural injections for low back pain and lumbosacral radiculopathy. *Pain*, 24: 277-295, 1986.
5. Bernat J.L.: Intraspinal steroid therapy. *Neurology* 31: 168-171, 1981.
6. Bogduk N., Cherry D.: Epidural corticosteroid agents for sciatica. *Med. J. Aust.*, 143: 402-406, 1985.
7. Bogduk N., Brazenor G., Christophidis N., Cherry D., Fraser R., Jenkins J., Little T.F., Ditton J., Jeffries R.: Epidural use of steroids in the management of back pain. National Health and Medical Research Council, 1994.
8. Burn J.N., Guyer P.B., Langdon L.: The spread of solutions injected in to the epidural space. *Brit J Anaesth. Analg.*, 67: 175-179, 1988.
9. Duran-Reynals F.: The effects of extracts of certain organs from normal and immunized animals on the infecting power of vaccine virus. *J. of Expt. Med.*, 50: 327-340, 1929.
10. El-Khoury G.Y. et al.: Epidural steroid injection: A procedure ideally performed with fluoroscopic control. *Radiology*, 168: 554-557, 1988.
11. Gourie-Devi M., Satish P.: Intrathecal hyaluronidase treatment of chronic spinal arachnoiditis of noninfective etiology. *Surg. Neurol.*, 22:231-4, 1984.
12. Hitchcock E.: Osmolytic neurolysis for intractable facial pain. *Lancet* 1: 434-436, 1969.
13. Hitchcock E.R.: Hypothermic subarachnoid irrigation. *Lancet*, 1: 1330, 1967.
14. Hurst E.W.: Adhesive arachnoiditis and vascular blockage caused by detergents and other chemical irritants, an experimental study. *J. Path. Bact.*, 70: 167-178, 1955.
15. Jewett D.L., King J.S.: Conduction block of monkey dorsal rootlets by water and hypertonic saline solutions. *Exp. Neurol.* 33., 225-237, 1971.
16. Kepes E.R., Duncalf D.: Treatment of backache with spinal injections of local anesthetics, spinal, and systemic steroids. A review. *Pain*, 22: 33-47, 1985.
17. Lake D.A., Barnes C.D.: Effects of changes in osmolality on spinal cord activity. *Exp. Neurol.*, 68: 555-567, 1980.
18. McCarron R.F., Wimpee M.W., Hudkins P.G. et al.: The inflammatory effect of the nucleus pulposus: A possible element in the pathogenesis of low back pain. *Spine*, 12: 760-764, 1987.
19. McNab I.: The mechanism of spondylogenic pain. In Hirsch C., Zotterman Y. (eds): *Cervical Pain*. Pergamon, Oxford, pp 89-94, 1972.
20. Özyalçın S., Yücel A., Erdine S.: The efficacy of epidural corticosteroid and hypertonic saline injection for chronic low back pain. 1st Scientific Meeting of the European Federation of IASP Chapters. *Pain in Europe. Fiera di Verona: May 18-21, 1995.*
21. Payne J.N., Ruff N.Y.: The use of hyaluronidase in caudal block anesthesia. *Anesthesiology*, 12:162-172, 1951.
22. Raj P.P., Erdine S., Niv D., Raja S.: Management of pain a world perspective. 6th International Congress Pain Clinic, Atlanta, Georgia (USA), 15-20 April, Monduzzi Editore, pp. 512-529, 1995.
23. Racz G.B., Haynsworth R.F., Lipton S.: Experiences with an improved epidural catheter. *The Pain Clinic*, 1: 21-27, 1986.
24. Racz G.B., Heavner J.E., Singleton W. et al.: Hypertonic saline and corticosteroid injected epidurally for pain control. In Racz G.B. (ed): *Techniques of Neurolysis*. Boston, Kluwer Academic Publishers, pp 73- 86, 1989.
25. Racz G.B., Heavner J.E.: Aristocort and Depo-Medrol passage through a 0.2µ filter. *Abs. ASRA Ann. Mtg. Reg. Anesth.*, 15: 25, 1991.
26. Racz G.B., Holubec J.T.: Lysis of adhesions in the epidural space. In: Racz G.B. (ed): *Techniques of Neurolysis*. Boston, Kluwer Academic Publisher, pp 57-72, 1989.
27. Racz G.B., Sabonghy M., Gintautas J., Kline W.M.: Intractable pain therapy using a new epidural catheter. *JAMA*, 248: 579-581, 1982.
28. Swerdlow M.: Complication of neurolytic neural blockade. In Cousins M.J., Bridenbaugh P.O. (eds): *Neural Blockade*. Philadelphia, Lippincott 543-553, 1980.
29. Ventaffrida V., Spreafico R.: Subarachnoid saline perfusion. In Bonica JJ (ed): *International Symposium on Pain. advances in Neurology*, Vol 4. New York, Raven Press., 477-484, 1974.
30. Winnie A.P., Hartman J.T., Meyers H.L. JR.: Pain clinic II. Intradural and extradural corticosteroids for sciatica. *Anesth. Analg. Curr. Res.*, 51: 990-999, 1972.