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CAUDAL, EPIDURAL ADMINISTRATION OF ANAESTHETICS AND CORTICOIDS IN THE TREATMENT OF LOW BACK PAIN

By

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A high incidence of back disorders among the population and a high total cost of treatment have recently been reckoned (6, 11). The causal diagnosis often remains obscure in spite of accurate clinical and radiological investigation (8). Treatment must frequently aim only at symptomatic cure and should be conservative at the beginning, except in cases of massive root involvement. Secondary surgery should be resorted to in cases of chronic disability, and if conservative measures have failed (1). There has been a tendency to increase the body of conservative procedures.

The use of the caudal approach to the epidural space has been established as a safe and advantageous method for use both in operative specialities and in therapeutics (3, 4, 19). The strong anti-inflammatory properties of the water-soluble glucocorticoids gave an impulse to their epidural administration in patients with back pain (5, 10, 12). Combined treatment with anaesthetics has proved promising (2, 7).

PRESENT SERIES

We administered prednisolone¹ and xylocain² by the caudal method (9) in 33 out-patients with low back pain, some of them with symptoms of nerve root compression. The aetiological diagnosis could not be stated with certainty in all cases.

¹ Di-Adreson-F aquosum Organon 25-50 mg.

² Xylocain Astra 1% 15 cc.

RESULTS

The results as regards immediate response, usually with relief of pain and myospasticity, were favorable in 30 patients. We were impressed by the free range of movement of the lumbar spine, which had previously been in a state of rigidity from muscle spasm. Within 30 minutes after injection most patients treated could bend their back quite easily and painlessly in any direction if they were asked to do so. The aggravation of pain caused by a sudden cough reflex, which was found in 19 patients, could not be felt by 16, and was felt only faintly by 2, immediately after injection. We registered the immediate reaction and effect upon the clinical sign of Lasegue in each case. So it was found that the positive degree of that test usually decreased, in some cases reaching an almost normal state, simultaneously with the diminishing of pain. At follow-up, usually from two to at most six months after treatment, 25 cures, 4 improvements and 4 conditions unaltered were registered (Table 1). No serious complications occurred.

TABLE 1
Results of caudal epidural injection of xylocain and prednisolone in 33 patients with low back pain.

Probable causal diagnosis	Num- ber	Primary response			Follow-up		
		Good	Some	None	Cure	Better	Unaltered
Disc degeneration	13	12	1	—	10	1	2
— and rootpressure	14	13	1	—	12	1	1
— and acute strain of lig. ...	5	5	—	—	3	2	—
— and postoper. root adhes.	1	—	1	—	—	—	1
	33	30	3	—	25	4	4

SUMMARY

The impression was gained of a simple, safe and usually effective addendum to the conservative means of treatment of the low back pain patient.

RESUME

On a l'impression d'avoir trouvé un moyen complémentaire simple, sûr et généralement efficace au traitement conservateur des malades souffrant de douleurs dans la région lombaire.

ZUSAMMENFASSUNG

Der Eindruck einer einfachen, sicheren und meist wirksamen Hinzufügung zu den konservativen Behandlungsmöglichkeiten des Patienten mit tiefsitzendem Rückenschmerz wurde gewonnen.

REFERENCES

1. *Berovic, Z., Lopacic, L., Nedvidek, B. & Korunovic, N.*: The lumbar syndrome (Serbian). *Srpski Arhiv Celok. Lek.* 89: 55, 1961.
2. *Beyer, W.*: The cervical and lumbar disc syndrome and its treatment by procain-prednisolone injection into the nerve roots. (German). *Münch. Med. Wschr.* 102: 1164, 1960.
3. *Coomes, E. N.*: A comparison between epidural anaesthesia and bed rest in sciatica. *Brit. Med. J.* 20: 1960.
4. *Cyriax, J.*: Lumbar disc-lesions. Conservative treatment.—The first volume of the Publications of the XII. International Congress on Occupational Health in Helsinki 1957. *Valtioneuvoston kirjapaino, Helsinki*, 122–127, 1957.
5. *Hellens, von A.*: Treatment of lumbar root compression by epidural injections of hydrocortisone. (Finnish). *Duodecim* 78: 28, 1962.
6. *Hirsch, C.*: The biological explanation of low back pains. (Hebrew). *Dapim Refuim* 17: 25, 1958.
7. *Mahner, A.*: Peridural injection of procain and corticosteroids in the treatment of the lumbar radicular syndrome. (German). *Zbl. Chir.* 85: 625, 1960.
8. *Russo, D.*: The syndrome of lumbo-sacro-sciatic pain. (Italian). *Ann. Med. Nav. Trop.* 65: 285, 1960.
9. *Pitkin, G. P.*: Conduction anaesthesia. J. B. Lippincott Co., Philadelphia, 1953.
10. *Ruggiero, F. & Capello, A.*: Hydrocortisone in the treatment of lumbago and sciatica. (Italian). *Minerva Ortop.* 7: 388, 1956.
11. *Thatcher, D. S.*: One hundred cases of low back pain. *Amer. J. Surg.* 97: 383, 1959.
12. *Yamazaka, N.*: Interspinal injection of hydrocortisone or prednisolone in the treatment of intervertebral disc herniation. (Japanese). *J. Jap. Orthop. Soc.* 33: 689, 1959.