
Epidural clonidine for the anaesthetic management for diagnostic procedure

Sir,

Non-operating room anaesthesia (NORA) procedures have increased tremendously over the last few years due to rapid technological developments and have resulted in improved outcomes and survival. The key to providing an optimal anaesthesia in NORA is based on the type of the procedure and the physiology of the patients.

Providing anaesthesia in magnetic resonance imaging (MRI) suite poses several unique problems including limited patient access and visibility, absolute need to exclude ferromagnetic components and prevent malfunction of monitoring equipment.^[1]

Alternative approaches to general anaesthesia are gaining popularity which is being highlighted in the present case.

A 35 year old male was admitted in our institute as a diagnosed case of lumbar disc prolapse with impending cauda equina syndrome [Figure 1].

His blood investigations and other parameters were normal. He was advised MRI for a precise diagnosis so as to plan an appropriate intervention. Due to severe back pain and muscle spasm, the patient was unable to lie down in supine position. Looking at the limited resources at MRI suite in our setup, he was given intravenous sedation and analgesic in the form of injection fentanyl, injection midazolam, injection haloperidol and injection dexmedetomidine infusion, but it proved inadequate and MRI could not be done. Hence, next sitting for MRI was planned under regional anaesthesia.

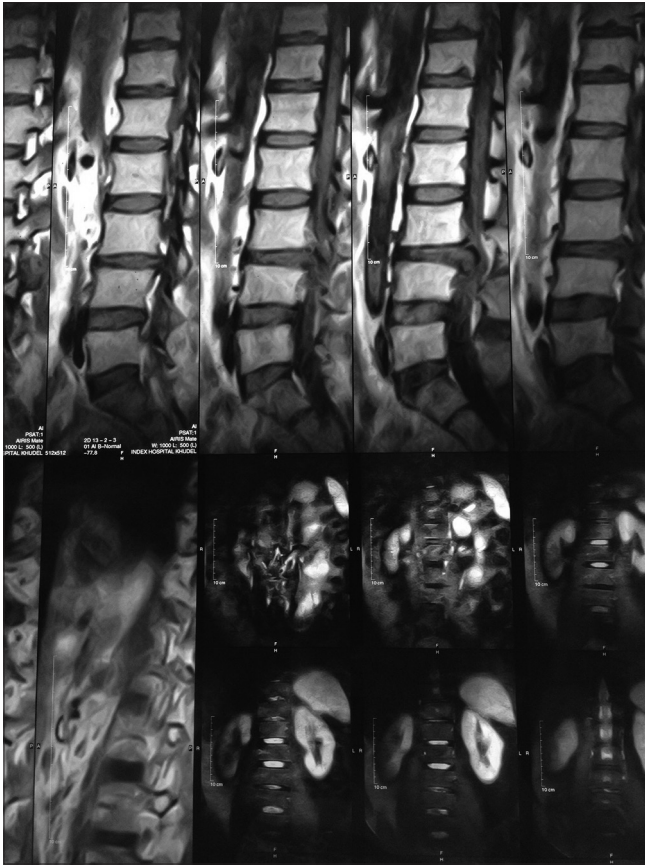


Figure 1: Magnetic resonance imaging of lumbosacral spine of the patient

After taking written consent and keeping nil orally for 6 h, the patient was taken to operation theatre (OT) with all necessary precautions. L2–L3 epidural space was identified in the sitting position. After injecting 10ml of bupivacaine 0.25% admixed with clonidine (150 µg), the patient was made to lie down. Within 3 min he was relieved of pain. He remained stable and comfortable in the OT. After observing for 20 min, haemodynamic parameters remained stable, and he was shifted to MRI suite with running intravenous fluid and cordless pulse oximeter.

In MRI suite, patient's vital parameters were monitored continuously while intravenous fluid was being administered by infusion. The patient lay supine on the table comfortably. MRI study was completed in 40 min in a single sitting and was uneventful. His blood pressure fell slightly with marginal bradycardia which did not require pharmacological support. The patient was shifted to the recovery room with specific instructions to monitor his vitals, was kept nil orally for another 2 h, and duration of analgesia and motor power in

the lower limbs were observed. He received 2 L of intravenous fluids in perioperative period.

His vitals were stable throughout the recovery period; pain started after 5 h of injection which was grade 3–4 on the visual analogue scale and motor power of lower limb returned to its previous state in 3 h.

Lumbar disc prolapse leading to radiculopathy is a common clinical problem that results in significant disability.^[2] Pain and other neurologic symptoms associated with this condition are likely as a result of mechanical compression and local inflammation of spinal nerve roots.^[3] Radicular pain is so severe in nature that it may not be relieved by systemic analgesics which as in the present case.

Neuraxial bupivacaine 0.25% leads to muscle relaxation with almost stable haemodynamic and good sensory blockade; to prolong the duration of analgesia we added 0.2 µg/kg of clonidine, as it is clinically used to treat neuropathic pain.^[4]

In addition to analgesia mediated by its action at α -2 adrenergic receptors located in the central and peripheral nervous system, clonidine may have anti-inflammatory activity that could influence pain by other mechanisms.^[5] Clonidine acts as an analgesic and anti-inflammatory agent in the setting of peripheral nerve injury. Clonidine has demonstrated effects on reducing both nociceptive and neuropathic pain in experimental models and in clinical use. Studies done previously concluded that epidural clonidine results in functional improvement in radicular pain.^[4] From the present case, it can be concluded that epidural clonidine provides significant pain relief, particularly in patients with neuropathic pain.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Access this article online	
Quick response code	Website: www.ijaweb.org
	DOI: 10.4103/0019-5049.177873

How to cite this article: Bansal SA, Tilkar Y, Karmalkar S. Epidural clonidine for the anaesthetic management for diagnostic procedure. Indian J Anaesth 2016;60:221-3.

Announcement

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Dr. Venugopal A.

Co-ordinator, KPR Endowment, Past Treasurer - ISA Kerala State Chapter, Additional Professor in Anaesthesiology, Regional Cancer Centre (RCC), Medical College Campus, Trivandrum, Kerala - 695 011, India.

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