

## Dexmetomidine and the Enhancement of a Regional Anesthesia

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**Case Report**

68 year old gentleman scheduled for a right total hip replacement with a history of severe sleep apnoea on a CPAP machine, morbid obesity (BMI 55), ischaemic heart disease and hypertension.

The decision was made to do a combined spinal epidural and use the epidural for post op pain management.

Although technically challenging the CSE was done without any difficulty.

**Spinal:** 2mls 0.75% bupivacaine with dextrose and 5mcg sufenta (1 ml) → 3 ml volume.

A dexmetomidine infusion was commenced without the loading dose as it has been found that it is the loading dose of 1mcg/kg that causes the profound hypotension and bradycardia. The infusion was run at 0.7mcg/kg for the duration of the surgery which lasted just under two hours.

In the recovery room, the patient was comfortable and pain free. The epidural was commenced at 8mls an hour once the patient had no motor block and the sensory level had dropped down to L1. The epidural infusion consisted of 0.1 % bupivacaine with 2mcg/ml of fentanyl.

The patient was sent up to the ward 2 hours after being in recovery completely pain free.

When reviewing the patient in the pain rounds later that evening it was discovered that despite an L1 sensory level, the patient was completely pain free and mobilizing. A top up was given through the epidural to get the sensory level up to T10. The patient was reviewed on the pain rounds the next morning and found to be comfortable with a sensory level of T11 and mobilizing well.

**Discussion**

What was most interesting in this case was that the dexmetomidine infusion seemed to be enhancing the effects of the epidural keeping the patient comfortable and pain free while getting the sensory level adjusted accordingly. The effects of dexmetomidine seemed to last for a good 24 hours despite its much shorter half life.

It kept the patient Co operative and relaxed intraoperatively without any apnoea and kept the patient pain free while getting the epidural to the correct optimal sensory level to maintain adequate analgesia [1-3].

**Conclusion**

Dexmetomidine has significant analgesic properties beyond what is the considered half life and appears to enhance regional anesthesia and keep patients pain free at a much lower sensory level than if regional analgesia was used on its own.

**References**

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3. Mantz, Josserand, Hamada (2011) Dexmetomidine: new insights. European Journal of Anesthesia 28: 3-6.

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