

# **Combination of combined spinal-epidural(CSE) analgesia and TCI-propofol is that sufficient for lower abdominal surgery in the elderly patients?**

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## **SUMMARY:**

Purpose of the study: to identify the suitable cerebral concentration(Ce) of propofol during TCI-propofol for maintaining anesthetic levels on Sedline machine(PSI) at deep sleeping state(70-80) in combining with CSE in giving a sufficient anesthesia for lower abdominal surgery in the elderly patients?

Patients and methodes: 100 patients aged over 60, ASA I-III, having got lower abdominal surgery were included. All patients were given CSE at lumbar L2-4 with spinal heavy bupivacain (7mg), and with continuous epidural infusion at 10ml/hour of bupivacain 0,2% + sufentanil 0,5mcg/ml mixture for analgesia just before the induction. Patients were then randomised into two groups; G1: induction was started at Ce = 1mcg/ml of TCI-propofol, then incremental increases every 2 minutes at 0,5mcg/ml until the anesthetic level at  $70 < \text{PSI} < 80$ . G2: induction was started at Ce = 3mcg/ml, then incremental decreases every 2 minutes at 0.5mcg/ml also in order to keep  $70 < \text{PSI} < 80$ . All patients were spontaneous breathing with oxygen at 3l/min via face mask or LMA( patients excluded if mechanical ventilation needed); Patient's heart rates and NIBP were normally maintained with I.V infusions and/or I.V ephedrine bolus. Analgesic rescue with 5-10ml of lidocaine 2% injected via epidural catheter if needed( patients excluded if general anesthesia required). Analgesic levels identified with blunt needle technique, lower limb's movements with Bromage's score(Br), SpO<sub>2</sub>, EtCO<sub>2</sub>, Heart Rates(HR), NIBP, were recorded in the G.E B650 monitor; anesthetic levels were monitored with Sedline(PSI). All parameters were statistically evaluated in SPSS 16.0 programme. The study has been approved by the ethical committee of the hospital.

Results: Only one patient was excluded because of insufficient analgesic level after lidocaine added. Mean Pt's ages were  $72.84 \pm 7.51$  years( 60-89); Pt's heights :159.77

$\pm 6.37$  cm(145-175); Pt' weights:  $54.68 \pm 8.01$  kg(36-75). The sex identifications were 36 male(72%), and 14 female(28%) in G1; and 39 male( 79.59%), and 10 female(20.41%) in G2, with no significant differences between two groups( $p>0.05$ ). Mean surgical durations were  $151.10 \pm 53.32$  min(45-260) in G1; and were  $147.73 \pm 56.22$  min(55-273) in G2. The mean analgesic appearances at T6 level were  $5.51 \pm 1.16$  min(5-10); and mean movement depressions at Br III were  $5.47 \pm 1.01$  min(2-10); The mean Ce of TCI-propofol was  $1.29 \pm 0.21$  mcg/ml(0.91-1.84) to maintain PSI at  $75.28 \pm 3.08$  in G1; and mean Ce was  $1.69 \pm 0.30$  mcg/ml(1.00-2.91) to maintain PSI at  $74.34 \pm 3.27$  in G2 through out the surgery with no significant differences between two groups. There was a mutual correlation between Ce and PSI at every moments( $p<0.05$ ). 99/100 patients have been undergone the surgery without significant changes in respiratory and hemodynamic functions. Both surgeons and patients have got good consents of the surgery; no any patients have got recall after the operations.

Conclutions: The combination of CSE and TCI-propofol at Ce of 1.25- 1.69 mcg/ml to maintain anesthetic level at PSI of 75.28- 74.34 may be a suitable anesthetic technique for lower abdominal surgery in the elderly patients. The patients haven't got tracheal intubation and muscle relaxation, but with good surgical condition, which accelerate the recovery of these special patients after the surgery.

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