475202 - SELECTIVE SPINAL ANESTHESIA: A COMPARISON OF 2-CHLOROPROCAINE WITH LIDOCAINE FOR AMBULATORY TUPR SURGERY

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Introduction: Selective spinal anesthesia (SSA) is a technique routinely used in our institution to provide surgical anesthesia for ambulatory transurethral prostate resection(TUPR)(1). In North America, lidocaine has been the agent of choice for SSA, with an excellent safety profile. However, concerns over the incidence of Transient Neurologic Symptoms(TNS), have led to the search for alternative agents. Recent work by Kopacz(2,3), and Casati(4), using 2-Chloroprocaine(2-CP) offers hope of a safe, effective alternative with a favorable recovery profile. Our aim was to test the hypothesis that the use of 2- CP would provide a faster recovery profile, with improved safety and satisfaction.

Methods: This study was designed as a prospective, randomised, and double-blinded trial. After receiving institutional ethics approval, and obtaining informed consent, we recruited 40 patients (20 per group) undergoing ambulatory TUPR surgery. Both groups were matched for age, ASA status, height, weight and BMI. They were randomized to receive spinal anesthesia with either I. 2% Lidocaine 35mg + Fentanyl 12.5µg , or II. 2% 2-CP 40mg + Fentanyl 12.5µg. Standard spinal anesthesia was performed by the staff anesthesiologist in the OR. Sensory block height and motor block (using a Modified Bromage Score) were noted, by a blinded assessor, every 5 minutes in the OR, followed by every 15 minutes in PACU, until complete sensory and motor function had returned, and the patient had successfully ambulated. A follow-up phone call was made 72 hrs post-surgery, to inquire about pain, headache, PONV, and evidence of TNS.

Results: Mean (S.D) times for recovery of sensory and motor function, and unassisted ambulation were faster with 2-Chloroprocaine [155(55.9) min; 117.75(36.18) min; 152.6(74.39) min] compared to Lidocaine [163.5(37.35) min; 120(35.76) min; 167.4(99.94) min]. These were not statistically significant(Table 1). There were 4 episodes of TNS reported in the lidocaine group, and zero in the 2-CP group. Post-surgery pain, headache and PONV were similar in both groups. There was one case of persistent neurological symptoms in the 2-CP group.

Discussion: Although the use of intrathecal 2-Chloroprocaine does result in quicker recovery of sensory and motor function, and unassisted ambulation, compared to lidocaine, we did not show a statistically significant difference. We found that there was no clinically significant difference between the two drugs in this setting.

References: 1. Can J Anesth 1998; 45:64-70; 2. Anesth Analg 2005; 100(2):553-8; 3. Anesth Analg 2004; 98:89-94; 4. Anesth Analg 2007; 104(4):959-64.

Table 1. Patient Outcomes

Outcomes	Chloroprocaine (N=20)	Lidocaine (N=20)
Time to Sensory Recovery (SD) mins	155 (55.9)	163.5 (37.35) ns
Time to Motor Recovery (SD) mins	117.75 (36.18)	120 (35.76) ns
Time to Unassisted Ambulation/Home Ready (SD) mins	152.6 (74.39)	167.4 (99.94) ns
Complications at 72 hrs follow-up:		
Pain(%)	10(50)	8(40)
PONV(%)	1(5)	2(10)
Headache(%)	0(0)	2(10)
TNS(%)	0(0)	4(20)