Case Report

Intrathecal block for breast augmentation surgery in poland's syndrome: A case report

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Abstract

Breast augmentation is an increasing popular day case procedure. Local infiltration anaesthesia with sedation is routinely used for it's ease of application as compared to more complex and potentially riskier intrathecal block. We hypothesized that intrathecal isobaric ropivacaine by experienced anaesthetist was more effective than local anaesthesia with sedation, in view of adequate sensory blockade. Intrathecal Isobaric ropivacaine which is less cardiotoxic produces more sensory blockade over motor blockade as compare to intrathecal hyperbaric bupivacaine which is most popular anaesthetic drug for spinal anaesthesia. Moreover ropivacaine needs less dose and does not require head low position to achieve higher level of blockade as compare to bupivacaine since it is isobaric in nature. we present a case of unilateral breast augmentation of a women, successfully performed by the application of intrathecal block without any complication.
Keywords: poland's syndrome, Breast augmentation.

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CASE REPORT

A 15 year old female patient (body weight 49 kg, height 160cm) came with chief complaint of absence of left breast since birth, was planned for breast augmentation surgery under spinal anaesthesia. The patient had no co-morbid diseases and no past history of surgery. preoperative routine laboratory analyses revealed normal complete blood count and biochemical parameters. The patient was placed on the operating room table and following 500 ml ringer lactate infusion, her heart rate (HR), systolic blood pressure (SBP),diastolic blood pressure(DBP) and peripheral oxygen saturation (SpO_2) were monitored and preoperative measures were recorded (HR 82beats /min, SBP 117mmHg, DBP 80 mmHg,SpO_2 99%). She was administered oxygen (O2) at a rate of 4 L/min through a nasal catheter. With the patient lying on the left lateral side, a 26 gauge Quincke spinal needle was used to access the subarachnoid space through L1-L2 interval with a single puncture. After free flow of the cerebrospinal fluid (CSF) was visualized, 15 mg isobaric 0.5% ropivacaine was injected in the CSF within 15 seconds. Then the patient was placed in the supine position. Vital signs were monitored. For the assessment of spinal anaesthesia, sensory block was measured with the hot-cold test and the Bromage scale was used for motor block assessment. It was observed that the sensory block at the 15 th minute was at T2 level, Bromage scale 3 and surgery was started.

Intraoperative monitoring of haemodynamic and respiratory parameters revealed HR 75-84 beats/min, SBP 110-120mmHg, DBP 71-78 mmHg and SpO_2 98-99%. The patient did not develop hypotension, bradycardia and did not require ephedrine or atropine during the operation. The intervention was completed after 60 mins without any complication. After the patient left the recovery room we evaluated the patient for second time and observed that sensory block at T3 level, Bromage scale 3 and SBP 110mmHg, DBP 72mmHg, HR 71 beats /min, SpO2 99% at room air.

	4th hours	5th hours	6th hours	7th hours
Sensory block	T9-10	L1-2	S1-2	-
Motor block	2	1	0	0

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However, in the third evaluation, it was decided to carry out these evaluations more frequently or hourly. In the postoperative visit four hours after the spinal anaesthesia, the sensory block was at T9-10 level and the motor block according to the Bromage scale at grade 3. Thus, to avoid missing any neurological complications, sensory and motor block were evaluated hourly (table). Complete recovery of the sensory and motor blocks was observed at 7 th hours after spinal injection of the drug. No neurological symtoms or signs such as urinary or anal incontinence, dysesthesia and lumber or leg pain developed in conjunction with prolonged sensory and motor block. The patient was discharged from the hospital at post operative day two without any complications.

DISCUSSION

We observed in our case, intrathecal isobaric Ropivacaine (0.5%) produced more and longer duration of sensory block as compare to shorter duration of motor block. This finding is consistent with the report by Singh *et al.*[1] the duration of motor block was significantly ($p < 0.01$) in ropivacaine group (112.5±45) as compare to bupivacaine group (165±26) there is a greater degree of sensory motor separation with ropivacaine as compare to bupivacaine , also reported by McClellan *et al.*[2] ropivacaine being a pure S- enantiomer has low lipid solubility and blocks nerve fibres involved in pain transmission to a greater degree than those involve in motor function. Throughout the perioperative period patient was hemodynamically stable without any need of vasoactive and sympathomimetic drugs which supports the report by Mantouvalou *et al.*[3] Bupivacaine required more often the use of a vasoactive drug (ephedrine) compared to both ropivacaine and levobupivacaine and of a symapthomimetic drugs (atropine) compared to the Ropivacaine group. There is no respiratory disturbances in perioperative and postoperative period along with no other complication like anal or urinary incontinence and early recovery from motor blockade also, reported by

Lirk *et al.*[4] shorter motor block would mean early recovery from respiratory disturbance caused by spinal anaesthesia and shorter time to first micturation and early recovery.

CONCLUSION

With intrathecal isobaric Ropivacaine (0.5%) we can perform surgery (example: breast augmentation surgery), which requires higher level of sensory block without any significant hemodynamic changes or complications like respiratory disturbances with advantage of early ambulation.

REFERENCES

1. Singh S, Singh VP, Jain M, Gupta K, Rastogi B, Abrol S. Intrathecal 0.75% isobaric ropivacaine versus 0.5% heavy bupivacaine for elective caesarean section delivery: A randomized controlled trial. J Pak Med stud 2012, 2(2):75-80.
2. McClellan KJ, Faulds D. Ropivacaine- An update of its use in regional anaesthesia. Drugs 2000; 60(5): 1065-93.
3. Mantouvalou M, Ralli S, Arnaoutoglou H, Tziris G, Papadopoulos G. Spinal anaesthesia: Comparision of plain ropivacaine, bupivacaine and levobupivacaine for lower abdominal surgery. Acta Anaesthesiol Belg. 2008;59(2): 65-71.
4. Lirk P, Kleber N, Mitterschiffthaler G, Keller C, Benzer A, Putz G. Pulmonary effects if bupivacaine, ropivacaine and levobupivacaine in parturients undergoing spinal anaesthesia for elective caesarean delivery :A randomized controlled study. Int J Obstet Anesth 2009; 19: 287-92.

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