

Background: Delivery by caesarean section (CS) is becoming more frequent. Childbirth is an emotion-filled event, and the mother needs to bond with her baby as early as possible. Any intervention that leads to improvement in pain relief is worthy of investigation. Local anaesthetics have been employed as an adjunct to other methods of postoperative pain relief.

Objective: To insure the efficacy of infiltration of lidocaine 1% in the surgical site of Cesarean Section, just before incision, in decreasing postoperative pain, in comparison to other forms of preemptive analgesia that includes central nerve block (spinal anesthesia), and multi modal parenteral analgesia.

Patients and Methods: This is a prospective, randomized, controlled trial study in which patients undergoing CS were randomly divided into four groups:-

Group A Patients (control plain GA), Group B Patients with multi modal analgesia
Group C Patients with local tissue infiltration, Group D Patients with spinal anesthesia.

The protocol for induction and maintenance of general anaesthesia was similar for A, B&C groups.

Group A control patients (plain GA) without supplementary analgesia.

Group B parenteral multi modal analgesia (Acetaminophen & Diphenhydramine) given IM, just pre-operatively, and a Fentanyl 50Mg IV, just after delivery of the baby.

Group C patients received 20 ml of 1% Lidocaine infiltration 1-2 minutes before skin incision.

Group D have Spinal Anesthesia under Bupivacaine hyperbaric 0.5% 10mg intrathecally. Post-operative pain was evaluated in patients, at 30 min, 2, 4, 6 and 24 hr after surgery by visual analogue score (VAS), while lying still, and with movement. Time of first request for analgesia, and total amount of Pethidine consumed in 24 hr were recorded.

Results: The study enrolled a total number of 100 patients, 25 in each group. No side effects were recorded in all groups.

The total consumption of opioid (pethidine) after 24 hours was significantly different among the four groups 144.00mg in group A, 134.00mg in group B, 96.00mg in group C and 76.00mg in group D ($P \leq 0.05$), SD= 54.619, 47.258, 37.697, 35.707 for Group A, B, C and D respectively.

Higher dose of analgesia was used by Group A & B, whereas lower dose used by Group C & D, so there are significant differences ($p \leq 0.01$) between the last two methods than the former two methods. However the lowest dose was recorded in the spinal anaesthesia.

The first request for opioid was statistically different among the four groups