



279-Comparing the impact of intraperitoneal instillation of ropivacaine with hydrocortisone on postoperative pain after laparoscopic gynecological surgery

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Problem:

Although it has known enormous progress having reduced the intensity of postoperative pain and the need for opioids, laparoscopic gynecological surgery is still responsible for a remarkable early postoperative pain which remains the concern of the anesthesiologist. The purpose of this study is to compare the efficacy of intraperitoneal instillation (IP) of ropivacaine vs hydrocortisone hemisuccinate (HCHS) for pain relief following laparoscopic gynecological surgeries.

Materials and methods:

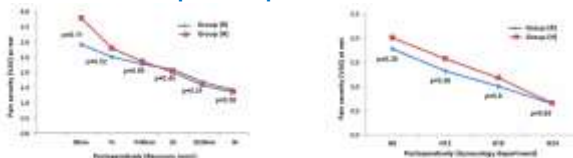
After the approval of the local ethics committee (the SUD Committee for the Protection of Persons) and informed consent, we conducted a prospective, randomized, controlled, double-blind study, including 45 patients scheduled for laparoscopic gynecological surgeries, aged between 20 and 70 years old and classified as ASA physical status I or II. The patients were randomly assigned into two groups: ropivacaine (Groupe R) and HCHS (Groupe H). In group R, 22 patients received an IP instillation of 3 mg/kg of ropivacaine diluted in 250 ml of normal saline (NS). In group H, 23 patients received an IP instillation of 100 mg of HCHS diluted in 250 ml of NS. A First anesthesiologist prepare the solution according to the randomization. The Second anesthesiologist is responsible of the Data collection and the intra and postoperative follow-up. Instillation was performed after completion of surgery and before exsufflation of pneumoperitoneum. The primary outcome was VAS score for pain at rest and on coughing over the first 24 hours postoperatively. The secondary outcomes were postoperative morphine requirements, time to first rescue analgesic request, total analgesic consumption, frequency of postoperative nausea and vomiting (PONV) and consumption of antiemetics in 24 hours, postoperative hemodynamic stability, postoperative rehabilitation

and the incidence of adverse effects related to ropivacaine or HCHS.

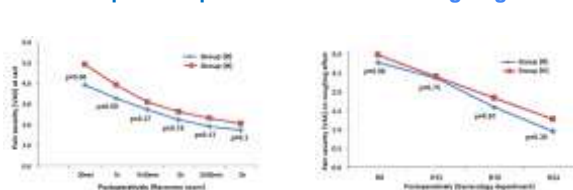
Results:

The 2 groups were similar with respect to demographic characteristics, preoperative anesthetic parameters, durations of surgery and anesthesia and intraoperative consumption of sufentanil. The patients were also similar regarding redistribution of types of surgical procedure and regarding factors increasing postoperative pain. No significant difference was reported between the two groups in terms of VAS scores at rest and during cough effort, postoperative consumption of morphine and rescue analgesics, time to first analgesic request, incidence of PONV, antiemetic consumption and postoperative rehabilitation. Furthermore, no complication attributable to ropivacaine or HCHS was objectified in either group.

Postoperative pain assessment at rest



Postoperative pain assessment on coughing effort



Discussion

Post-laparoscopic pain, essentially visceral, is diffuse, poorly localized and associated by motor and autonomous reflexes like nausea and vomiting. Major laparoscopic interventions, including hysterectomy and salpingo-ovariectomy, are usually associated with high postoperative pain scores and therefore considerable analgesic needs(1).

Amini et al. studied 63 candidates for laparoscopic cholecystectomy who were randomly assigned to receive 100mg of bupivacaine or 100mg of HSHC intraperitoneally. There was no significant difference in shoulder and abdominal pain scores between the two groups in the recovery room and 6, 12 and 24 hours after surgery(2). In addition, the two groups were similar concerning duration of hospitalization and the delay of resumption of intestinal transit.

Conclusion:

As a simple approach free of adverse effects, IP instillation of ropivacaine or HCHS reduces postoperative pain, opioid requirements and incidence of PONV and accelerates recovery after laparoscopic gynecological surgeries.

References

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- 2-Amini S, Sabzi Sarvestani A. Comparing the impact of intraperitoneal hydrocortisone with bupivacaine on postoperative pain after laparoscopic cholecystectomy. *Anesth Pain Med*. oct 2014;4(4):e17206.