

Ropivacaine & Diprospan infiltration Effective In reducing Pain score After Craniotomy

MD Bureau

Many sources suggest that patients undergoing craniotomy experience significant postoperative pain. A prospective study showed that up to 80% of patients experience mild to severe pain in the acute postoperative period.

A recent study suggests that diprospan and ropivacaine preemptive scalp infiltration is an effective technique for postoperative analgesia after craniotomy. The study findings were published in the journal *Anesthesia and Analgesia* on March 18, 2022.

Diprospan is a combination of quick-acting betamethasone sodium phosphate and long-acting betamethasone dipropionate. Whether Diprospan as an adjuvant to local anesthetic can achieve post craniotomy pain relief has not been studied yet. Therefore, Dr Xueye Han and her team conducted a study to assess the treatment effect of preemptive incision-site infiltration of ropivacaine plus Diprospan (versus ropivacaine alone) on postoperative analgesia for patients undergoing craniotomy.

In this prospective, single-centre, blinded, randomized, controlled clinical study, the researchers included 96 patients with the American Society of Anaesthesiologists (ASA) physical statuses of I to III, scheduled for elective supratentorial craniotomy. The patients were randomly assigned to either the Diprospan group, who received incision-site infiltration of 0.5% ropivacaine plus Diprospan (n = 48), or the control group, who received 0.5% ropivacaine alone (n = 48), with a distribution ratio of 1:1. The major outcome assessed was the cumulative sufentanil (μg) consumption through patient-controlled analgesia (PCA) within 48 hours after surgery. They performed a primary analysis based on the intention-to-treat (ITT) principle.

Key findings of the study:

The researchers noted that the baseline characteristics were not significantly different between the 2 groups.

In the Diprospan group, they found that the cumulative sufentanil consumption through PCA was 5 μ g within 48 hours postoperatively, which was significantly lower than that in the control group (38 μ g).

The authors concluded, "This study demonstrates that local infiltration of ropivacaine and Diprospan significantly decreases analgesic consumption within 48 hours postoperatively, reduces pain scores within 72 hours postoperatively, and achieves patient analgesia satisfaction when compared to ropivacaine infiltration alone; therefore, it is expected to be an alternative for postoperative analgesia."

For further information:

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