Efficacy of thoracic epidural analgesia with low concentration bupivacaine and fentanyl after thoracotomy.

Abhidej Saelao MD, Prachaya Pradit MD.

Department of Anesthesiology Ramathibodi Hospital, Mahidol University, Bangkok, Thailand 10400

Background:

Continuous thoracic epidural infusion of local anesthetics with opioid can provide postoperative analgesia after thoracotomy. But side effect of high dose local anesthetics was hypotension and motor blockade. This study was designed to evaluate efficacy of low concentration bupivacaine and fentanyl for postoperative thoracotomy-pain. The primary outcome was pain score (NRS) and total amounts of rescue dose of intravenous tramadol in first 24 hours after surgery. Secondary outcomes were incidence of side effects.

Methods :

Twenty eight patients undergoing thoracotomy were randomly assigned to receive an epidural infusion containing 0.03%bupivacaine + fentanyl 2 mcg/ml (group BF; n=14) or fentanyl 2 mcg/ml alone (group F; n=14). Infusion rate was 5-10 ml/hr for 24 hours after surgery. Patients were evaluates for pain score, total amounts of rescue tramadol and side effects including hypotension, motor blockade, nausea, sedation score and pruritus.

Results :

The two groups had similar demographic data. At postoperative 6-12 hrs, pain scores were significant lesser in group BF compared with group F (p=0.02). There was no statistical difference for cumulative tramadol requirement. Cumulative drug volume in group BF were significant lesser than group F (p=0.03). Incidence of side effects were also similar.

Conclusion :

Epidural 0.03% bupivacaine+ fentanyl 2 mcg/ml provided adequate postoperative thoracotomy-pain but not improved analgesia when compared with fentanyl alone.