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Inadequate analgesia with lumbar epidural following retroperitoneal dissection

To the Editor:

We wish to report a problem with incomplete spread of epidural analgesia following radical retroperitoneal dissection.

Radical retroperitoneal dissection has recently been proven to be the most effective method for treating retroperitoneal malignancies, especially of testicular origin. The operative procedure involves a thoraco-abdominal exploration with en bloc removal of retroperitoneal structures up to the level of the diaphragm. Epidural analgesia has been suggested as an effective method of postoperative pain relief without compromising pulmonary function in patients undergoing this procedure.¹ Many of these patients receive bleomycin therapy before surgery and may be at increased risk of developing the adult respiratory distress syndrome (ARDS) postoperatively; administration of a high FiO₂ is thought to be contributory in such instances.

At our institution, we routinely employ epidural analgesia postoperatively for patients undergoing thoraco-abdominal dissections. Of the 90 patients treated in this manner, satisfactory analgesia could not be achieved in nine patients. In those patients pain persisted in the upper areas of the incision despite both motor and sensory blockade in the lower abdomen and extremities and mild to moderate hypotension with each activation. Moreover, relatively large volumes of local anaesthetic solution (bupivacaine 25–30 ml, 0.5 per cent or lidocaine 15–25 ml 1.5 per cent solution) were used unsuccessfully in each instance, even with the patient in the Trendelenburg position. We also observed that in all nine patients the epidural catheter was placed at the L₄–L₅ interspace, and that placement of another catheter at the L₁–L₂ interspace with the tip directed 6 to 10 cm cephalad achieved satisfactory pain relief.

Anatomically, the epidural space communicates laterally with the paravertebral space through the intravertebral foramina. The paravertebral space is limited laterally and anteriorly by retroperitoneal tissue. Following radical retroperitoneal dissection, the paravertebral space communicates freely with the retroperitoneal space.^{2–6} We suggest that epidural injection of a local anaesthetic at or

below the level of the dissection results in leakage of the solution from the epidural space through the intravertebral foramina into the retroperitoneal space. Reduced retention and spread of the anaesthetic solution within the epidural space would explain the initial inadequate pain relief with the L₄–L₅ catheter in our nine patients. We now place epidural catheters at L₁–L₂ routinely in patients undergoing thoraco-abdominal resections, and since have had uniformly satisfactory analgesic results.

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Measurement of gastric contents

To the Editor:

We agree with the conclusion of Taylor *et al.*¹ that blind aspiration of gastric contents gives a fair estimate of volume, even if this is always an underestimate (the same may be true of dye dilution techniques).² One cannot determine from their data whether all of the additional volume obtained under direct vision with a gastroscope remained in the stomach following the initial blind aspiration, or represented endogenous secretions in response to the Salem sump tube and the gastroscopy