Correspondence

Perineal pruritus after the administration of iv dexamethasone

To the Editor:

We, too, have noticed the phenomenon described by Perron *et al.*¹ after a bolus injection of dexamethasone 8 mg *iv*. Our strategy to prevent this is to administer the dexamethasone immediately after the induction of general anesthesia. However, this might limit the efficacy of dexamethasone to prevent postoperative nausea and vomiting (PONV). The article by Wang compares the administration of dexamethasone before induction and at the conclusion of the anesthetic.² It does not take into account the administration of dexamethasone at any other time in the course of the anesthetic. This article is the only one which is quoted in the recent "Consensus guidelines for managing postoperative nausea and vomiting"³ with regard to the timing of the dose of dexamethasone. While Wang *et al.* conclude "the prophylactic *iv* administration of dexamethasone immediately before the induction, rather than at the end of anesthesia, was more effective in preventing PONV," I suspect that our technique is as effective as administering the drug before induction while avoiding this unpleasant side effect.

In Wang's study, late (2 to 24 hr postoperatively) PONV was reduced similarly by the administration of dexamethasone at the beginning or at the end of anesthesia, suggesting that the drug remains effective despite a later administration. Future studies should determine whether delaying its administration by a couple of minutes truly limits its efficacy to prevent PONV.

James T. Crandell BA MD FRCPC
Red Deer, Alberta

References

- 1 Perron G, Dolbec P, Germain J, Bechard P. Perineal pruritus after iv dexamethasone administration (Letter). *Can J Anesth* 2003; 50: 749–50.
- 2 Wang JJ, Ho ST, Tzeng JI, Tang CS. The effect of timing of dexamethasone administration on its efficacy as a prophylactic antiemetic for postoperative nausea and vomiting. *Anesth Analg* 2000; 91: 136–9.
- 3 Gan TJ, Meyer T, Apfel CC, *et al.* Consensus guidelines for managing postoperative nausea and vomiting. *Anesth Analg* 2003; 97: 62–71.

REPLY:

We would like to thank Dr. Crandell for his interest and comments regarding perineal pruritus after iv dexamethasone administration.¹ We agree with the fact that administering dexamethasone immediately after the induction of general anesthesia is probably as effective as administering it before induction. Since our report, we adopted the same strategy of giving dexamethasone after the induction of general anesthesia to avoid perineal pruritus.

Wang *et al.* reported that dexamethasone was not effective zero to two hours after its administration, but that it proved to be effective in the following period.² This finding probably explains the lower incidence of early postoperative nausea and vomiting observed in the group of patients receiving dexamethasone before the induction of general anesthesia in Wang's study since the mean duration of anesthesia in this group was 136 min. Nevertheless, further research is needed to clarify the onset time of dexamethasone's antiemetic effect and to determine if the timing of its administration relative to induction of general anesthesia could really affect its efficacy.

Since dexamethasone may be needed in awake patients in the postanesthesia care unit, the step down recovery unit or on the ward, anesthesiologists should inject the drug slowly over five to ten minutes to prevent perineal irritation and patient discomfort.^{3–5}

Philippe Béchard MD MSc FRCPC
Pierre Dolbec MD FRCPC
Julie Germain MD FRCPC
Gino Perron MD FRCPC
Lévis, Québec

References

- 1 Perron G, Dolbec P, Germain J, Bechard P. Perineal pruritus after iv dexamethasone administration (Letter). *Can J Anesth* 2003; 50: 749–50.
- 2 Wang JJ, Ho ST, Tzeng JI, Tang CS. The effect of timing of dexamethasone administration on its efficacy as a prophylactic antiemetic for postoperative nausea and vomiting. *Anesth Analg* 2000; 91: 136–9.
- 3 Thomas VL. More on dexamethasone-induced perineal irritation (Letter). *N Engl J Med* 1986; 314: 1643–4.
- 4 Andrews D, Grunau VJ. An uncommon adverse effect following bolus administration of intravenous dexamethasone. *J Can Dent Assoc* 1986; 52: 309–11.

- 5 Czerwinski AW, Czerwinski AB, Whitsett TL, Clark ML. Effects of a single, large, intravenous injection of dexamethasone. *Clin Pharmacol Ther* 1972; 13: 638–42.

Lumbar epidural anesthesia and celiac plexus blockade for cholecystectomy in two patients with severe chronic obstructive pulmonary disease

To the Editor:

Open cholecystectomy (OC) usually necessitates general anesthesia and endotracheal intubation. General anesthesia + epidural anesthesia (EA), thoracic EA, EA + intrapleural anesthesia, EA + *iv* anesthesia, and EA + local anesthesia have been used for upper abdominal surgery (UAS) in patients with pulmonary disease previously.^{1–3} Although celiac plexus blockade (CPB) can be recommended as an adjunct to EA for UAS, it is not common because of technical difficulties and risks. We report the effects of combined CPB and EA on metabolic and endocrine responses to surgery, respiratory function and pain intensity in two patients with chronic obstructive pulmonary disease (COPD) for OC.

Case 1: A woman (44 yr old) with chronic cholelithiasis had bronchiectasis (wheezing, sibilant rhonchi and clubbing) for ten years. (FEV₁/FVC: 60% and pH: 7.43, PaCO₂: 29 mmHg, PaO₂: 85 mmHg, BE: -3 mmol·L⁻¹, SaO₂: 96%.)

Case 2: A woman (65 yr old) had COPD (expiratory wheezing and rhonchi) and hypertension. (FEV₁/FVC: 58%, pH: 7.46, PaCO₂: 44 mmHg, PaO₂: 70 mmHg, BE: 6.9 mmol·L⁻¹, SaO₂: 95%). Both patients were admitted for OC. Other laboratory tests were normal.

Lumbar EA and CPB were planned in order to prevent deep visceral pain during OC. Premedication and bronchodilator medication were given. With standard monitors in place, an epidural catheter was placed at the L1–2 level. A test dose (3 mL 1.5 % lidocaine with 1:200,000 epinephrine) was given and 6 mL bupivacaine 0.25% given to provide analgesia during CPB by a posterior approach with a 12-cm 22 gauge needle. After a test dose, 30 mL 0.25% bupivacaine were injected to the celiac plexus bilaterally. After 15 min, 16 mL 0.25% bupivacaine were given epidurally and sensory blockade reached the T4 dermatome level in both patients.

During the procedure, mild hypotension was corrected with ephedrine 5 to 10 mg *iv*. Shivering was treated with meperidine 12.5 to 20 mg *iv* and midazo-

lam 2 mg *iv* was administered for sedation. The patients felt moderate pain [visual analogue scale (VAS) 4–5] only during subhepatic retraction, relieved with fentanyl 50 µg *iv*. Forty-five minutes into surgery, blood glucose and cortisol levels were normal or slightly elevated. At the end of surgery, bupivacaine 0.25% 8 mL was given epidurally for postoperative analgesia. Eight hours after surgery, pain (VAS 5–7) was relieved with 0.25% bupivacaine 8 mL epidurally. Intraoperative and postoperative arterial blood gas analyses were normal. The epidural catheters were removed on the morning after surgery. Postoperatively, glucose and cortisol levels were in the normal range. No complications of CPB were observed. The patients were discharged on the fourth and fifth day after surgery.

The celiac and splanchnic nerves are responsible for producing endocrine-metabolic responses to gastric surgery even under epidural blockade.⁴ Even when sensory blockade reaches the T4 dermatome sensory blockade to the viscera can be inadequate.⁵ It has been suggested that celiac plexus or superior hypogastric blockade should be performed in UAS.⁵

In conclusion, cholecystectomy can be performed under EA with CPB, almost inhibiting the stress responses to surgery, in patients with severe COPD. Cases should be selected carefully and CPB should be practiced by a skilled anesthesiologist. Alternatively, an intraoperative abdominal approach for CPB can be considered in order to prevent complications. Further studies are needed to compare EA and EA plus CPB for cholecystectomy in patients with severe COPD.

Elif Bengi Sener MD
Serhat Kocamanoglu MD
Emre Ustun MD
Zafer Malazgirt MD
Ayla Tur MD
Samsun, Turkey

Presented at Euroanesthesia 2003 in Glasgow, Scotland.

References

- 1 Konichezky S, Szmuk P, Ezri T, Soroker D, Ben-Aharon U, Pfefferman R. Combined intrapleural and low epidural anesthesia for upper abdominal surgery (Hebrew). *Harefuah* 1995; 128: 269–71.
- 2 Shipulin AA, Vasil'ev IuS, Karasev GB, Murav'ev GK, Martynov AN. Combined intravenous and epidural anesthesia in laparoscopic surgery (Russian). *Anesteziol Reanimatol* 1999; 6: 65–6.
- 3 Kouraklis G, Glinavou A, Raftopoulos L, Alevisou V, Lagos G, Karatzas G. Epidural analgesia attenuates the