

Correspondence

Cost containment in obstetric analgesia

To the Editor:

Cheng *et al.*¹ recently concluded that fentanyl provides similar analgesia at lower costs for labour analgesia compared to sufentanil. None of the currently available opioids possesses ideal pharmacokinetic properties for neuraxial use. Although limiting health care costs is warranted, care should be taken not to choose a less effective and potentially more harmful drug. In obstetric anesthesia, neonatal drug exposure is of equal importance, a point not discussed by the authors.

In an animal model, intrathecal fentanyl is more readily redistributed to the epidural space than sufentanil,² so one may ask why not inject it epidurally in the first place? This is in part explained by its lower octanol: buffer distribution coefficient facilitating meningeal transfer. Accordingly, epidural fentanyl for labour analgesia results in higher maternal plasma levels and higher fetal opioid exposure with reduced neonatal neurobehavioural test scores compared with sufentanil.³ In addition, there is a trend toward superior analgesia with sufentanil.³ Since epidural analgesia is an important component of the combined spinal-epidural technique, sufentanil for intrathecal injection would be taken from the same vial at no additional costs. In providing labour analgesia, anesthesiologists should reconsider choosing a more expensive technique with inherent risks and with no clinically significant benefit in properly designed trials,⁴ and then try to save these additional costs by opting for a potentially more harmful drug. We therefore propose to use epidural analgesia with sufentanil for labour, leaving the dura intact, and saving money.

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of intrathecally administered morphine, fentanyl, alfentanil, and sufentanil. *Anesthesiology* 2000; 92: 739–53.

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REPLY:

We concur with Dr. Gogarten et al., that to harm or to exact a less than effective therapy to any patient for any "reason" at all (e.g., saving costs or for a vested interest on the part of the clinician) is totally unwarranted. On the other hand, one should not be overzealous in defending excessive expenditure, especially if it is for a dubious advantage. Our study showed that the clinical benefits and side effects were indistinguishable between fentanyl and sufentanil; as a corollary, the lower cost of fentanyl is an advantage.¹

We believed it inappropriate to comment on the eventual neonatal well being as this would have been strongly influenced by a multitude of analgesia and non-analgesia related variables/exposures during the remaining intrapartum period. However, we did look at its surrogate, i.e., fetal heart rate tracing, and found no difference between fentanyl and sufentanil, albeit our study was probably underpowered here.

This is not a forum to discuss the veracity of extrapolating animal models to clinical anesthesia or the advantages/drawbacks of epidural fentanyl vs sufentanil; suffice it to say that over time, epidural infusion of both drugs does appear to produce analgesia by systemic uptake and redistribution.^{2,3} We therefore suggest a less dogmatic but more customized approach to labour epidural analgesia by using a low dose, multimodal (local anesthetic + lipophilic opioid ± μ_2 agonist) technique and by considering combined spinal-epidural analgesia when indicated (e.g., late first stage of labour).

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Fat embolism and postoperative coagulopathy

To the Editor:

I was interested to read the article¹ and accompanying editorial² regarding fat embolism and postoperative coagulopathy.

Byrick points out that "even after cardiac arrest and resuscitation, such an impressive coagulopathy, leading to shock and death is exceedingly rare".

I recently reported a case of the fat embolism syndrome³ in an 18-yr-old girl who had sustained a minimally displaced oblique fracture through the mid-shaft of her left tibia and fibula. In this case only very gentle, closed manipulation (performed within 24 hr of the accident) was required to bring the bones to a suitable alignment. Nonetheless, she developed disseminated intravascular coagulation, multi-organ dysfunction syndrome, and refractory hypoxemia, dying approximately six days and a half after the initial injury.

I agree with Byrick's comment that 'intravascular fat may only be a marker for the intravasation of marrow products during cemented arthroplasty': this then begs the question why did such a common event⁴ have such devastating consequences in these two particular patients? Does it have anything to do with an abnormal and overwhelming inflammatory response? If so, who (and why) are certain people liable to such reactions?

In the case I described the only medical history of note was that of resolved but, at the time, debilitating myalgic encephalomyelitis. Was this another manifestation of an abnormally reactive immune/inflammatory system? If the immune system is involved how can

we identify such patients, and such responses?
As always "more research is needed".

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Thoracoabdominal retroperitoneal lymph node dissection (RPLND) and hemodynamic instability in the postoperative period.

To the Editor:

Thoracoabdominal retroperitoneal lymph node dissection is the most common and accepted method of treatment for patients with testicular cancer. This procedure involves extensive retroperitoneal dissection performed via a thoracoabdominal incision. All the lymph nodes, metastatic masses and lymphatic tissues are removed. In approximately 10% of cases the aorta and vena cava are removed and replaced with grafts. Coincidental removal of sympathetic ganglia and fibres during dissection is inevitable and may result in signs and symptoms of autonomic dysfunction in these patients, such as postural hypotension and tachycardia.^{1,2} The signs and symptoms of autonomic dysfunction depend on the extent of the dissection, and such an extensive dissection is performed in 20-25% of the patients.

At the Norris Cancer Hospital we have done over 400 such cases and also managed them postoperatively in the intensive care unit.³ Our observation has been that the degree of hemodynamic instability (i.e., hypotension, tachycardia) directly correlates with the extent of the dissection. One-sided dissection results in ipsilateral signs of sympathectomy such as venous