

science, or “evidence.” Knowing the patient’s story and our own story are critical in medicine, particularly in a relationship-based discipline such as ours. Leyton raises the intriguing conundrum of the duality of particle and wave in quantum physics. He takes tolerance of uncertainty to a new level, and that is awareness of the mysterious in life. For many who think of themselves as modern, an encounter with the mysterious results in free-floating anxiety followed by denial or liturgies of pseudocontrol. This is particularly evident in our responses to childbirth and to dying. Leyton notes that disease or illness is not a fixed point but is constantly changing. I agree.

The uniqueness of family medicine has been highlighted by these letters. Family medicine is relationship based and the narrative is core. Family doctors must be expert in managing uncertainty and, yes, allowing for the mysterious. Our traditional specialist colleagues derive most of their benefit from analysis, a method that breaks things down into smaller and smaller pieces. We are called to see the big picture, to integrate and to put the pieces of life together for our patients and for ourselves.

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by e-mail

## ITN requires training

In the March 2007 issue of *Canadian Family Physician*, Dr Minty and colleagues discuss the advantages and safety of intrathecal narcotics (ITN) for labour pain and suggest this as a technique that all family physicians could consider adding to their basic skill sets.<sup>1</sup> Though both the Society of Rural Physicians of Canada and the Canadian Anesthesiologists’ Society support family physicians in the practice of anesthesia, both societies require that physicians undergo appropriate training. As a GP-anesthetist whose practice is limited almost exclusively to anesthesia, I have concerns about the safety of the use of this technique by those without additional training and experience in anesthesia.

This article points out that “mini-spinals” can be performed safely and provide excellent analgesia to women

during labour. For this to occur, however, one must be familiar with the pharmacology of the medications delivered intrathecally, as well as be able to anticipate and deal with any complications that might arise. Although family physicians are well suited to performing lumbar punctures, it is the administration and management of ITN that requires specialized skills. This is why additional training in anesthesia becomes mandatory.

Dr Minty and colleagues propose doses of ITN that are greater than or equal to what many anesthetists would give during surgical anesthesia for a cesarean section. A safety issue not discussed in the article is that the peak concentration of spinal morphine occurs 8 hours after administration and the duration of spinal morphine might be as long as 24 hours.<sup>2-4</sup> Additionally, peak respiratory depression has been found to occur between 3.5 and 7.5 hours after administration.<sup>5</sup> Those not familiar with this route of drug administration might cease appropriate monitoring once 4 hours have passed, as suggested in the article. It is because of this prolonged duration of intrathecal morphine that all anesthesia departments in which I have worked have specific protocols for dealing with side effects, most notably respiratory depression, in patients who have received morphine intrathecally. At our hospital, for the first 12 hours following a dose of intrathecal morphine, the only physician who can order additional narcotic or sedative medications is the anesthetist, as he or she is the one familiar with this route of administration.

Another safety concern not addressed by this article is that of administering intrathecal bupivacaine in combination with fast-acting narcotics. Even in low doses, this can result in profound hypotension and has also been implicated in causing uterine hypertonicity and thus fetal bradycardia.<sup>6,7</sup> Again, those who have not had the training and experience to deal with these uncommon yet serious side effects should not be performing the procedure.

Dr Minty and colleagues point out that ITN have a valuable role to play in the provision of analgesia for women during labour. In my opinion, however, if epidural services are not available due to the lack of an anesthetist, then ITN should not be an option. Though

performance of the procedure is within the realm of most family physicians, management of the pharmacology of ITN requires a specialized skill set. Just as a non-anesthetist family physician would not be expected to perform spinal anesthesia for a cesarean section, we should not encourage them to perform mini-spinals for labour analgesia.

—Phil Dopp MD CCFP  
Sault Ste Marie, Ont  
by e-mail

### References

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### Response

We are pleased (and not surprised) that single-dose spinal anesthesia during labour would stimulate debate. We agree with all of the technical points Dr Dopp brings forth, in fact they were well described in our first draft, but the review needed to be shortened for publication.

Delivery of safe obstetric service in our location includes general practitioners providing anesthesia, cesarean sections, external versions, and bedside ultrasounds. Clearly, varying levels of expertise and training are required.

Settings without epidural services are left with limited options for analgesia, including repeat doses of intravenous or intramuscular narcotics. These also impose the risk of respiratory depression and the need for adequate protocols for monitoring. In our situation the nursing staff was familiar with the use of intrathecal morphine as a common analgesic after cesarean section. It was an easy leap for them to modify their post-operative intrathecal narcotics (ITN) protocols. In our institution, intrathecal morphine patients are monitored with this protocol for 18 hours.

Dr Dopp identifies fetal bradycardia as a potential problem with this technique, and we referenced the study by Mardirosoff and colleagues (level I evidence), in which ITN did not have any effect on Apgar scores.

We are respectful of the opinion that Dr Dopp expresses about the suitability of this procedure's being disseminated through Canada's rural hospitals,

but we don't share it. Nor is it consistent with the feedback we have received from family doctors. We have had inquiries since this article was published from doctors wanting to improve analgesia in their obstetric practices, including GP-anesthetists hoping to provide a service that is less labour intensive than an epidural service. I note that many communities our size and larger provide no obstetric analgesia service of any kind because of the onerous time commitments that the epidural service entails. In our experience this time-efficient procedure has allowed us to provide a comprehensive obstetric analgesia service, including ITN and occasional epidurals.

If this article has piqued the interest of any family doctors to consider providing ITN during labour, we are confident they will be able to perform the due diligence to safely implement the program. We believe that family medicine training in Canada is specifically designed to give our doctors the skills to start providing new services as they evolve. This is not to dismiss the complex infrastructure set up in all of our hospitals that supports and ensures the provision of safe services. These include, but are not limited to our hospital boards, medical advisory committees, risk management departments, obstetric service departments, capable nursing staff and managers, and hospital pharmacists.

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by e-mail

## Morphine in breast milk

I read in the January issue of *Canadian Family Physician* about the tragic death of the baby resulting from the breastfeeding mother taking acetaminophen and codeine.<sup>1</sup> "Following the development of poor neonatal feeding, the mother expressed milk and stored it in

a freezer. Analysis of the milk for morphine ... revealed a concentration of 87 ng/mL.... The morphine measurement was further confirmed by gas chromatography-mass spectrometry."<sup>1</sup>

I have 2 questions.

Question 1: At 87 ng/mL, 1000 mL of breast milk would contain a total of 87 µg of morphine. How can such a small quantity be toxic to a baby that drinks only 60-90 mL at a time?

Also, "mass spectrometry revealed a blood concentration of morphine at 70 ng/mL and acetaminophen at 5.9 µg/mL. Neonates receiving morphine for analgesia have been reported to have serum concentrations of morphine at 10 to 12 ng/mL."<sup>1</sup>

Question 2: How can such small quantities of morphine in breast milk cause such high blood levels in the infant?

—Mitch Young MD

Manchester, NH

by e-mail

## Reference

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## Response

We wish to thank Dr Young for his interest in our Motherisk Update, and for his thoughtful observations.

The dose of 87 µg/L of milk calculated by him is not "such a small quantity" for a newborn. In fact, it is 30 µg/kg. In older infants a dose of 50 µg/kg is used for sedation. The newborn has much lower capacity to deactivate morphine.<sup>1</sup> Moreover, the newborn has substantially higher sensitivity to the central effects of morphine, partially due to more penetration through the blood-brain barrier.<sup>2</sup>

Last, as we indicated in the paper, the homozygosity the child exhibited to glucuronidation of morphine