

2. Rosenblatt MA, Abel M, Fischer GW, Itzkovich CJ, Eisenkraft JB. Successful use of a 20% lipid emulsion to resuscitate a patient after a presumed bupivacaine-related cardiac arrest. *Anesthesiology* 2006;105:217-218.
3. Stehr SN, Ziegler JC, Pexa A, Oertel R, Deussen A, Koch T, Hübner M. The effect of lipid infusion on myocardial function and bioenergetics in L-bupivacaine toxicity in the isolated rat heart. *Anesth Analg* 2007;104:186-192.
4. De La Coussaye JE, Eledjam JJ, Bassoul B, Bruelle P, Lefrant JY, Peray PA, Saïssi G, Desch G, Sassine A. Receptor mechanisms for clinical reversal of bupivacaine-induced impairment of ventricular conduction in pentobarbital-anesthetized dogs. *Anesth Analg* 1994;78:624-634.
5. Pham Dang C, Beaumont S, Floch H, Bodin J, Winer A, Pinaud M. Acute toxic accident following lumbar plexus block with bupivacaine. *Ann Fr Anesth Réanim* 2000;19:356-359.

doi:10.1016/j.rapm.2007.01.002

## Reply to Dr. Pham Dang

### To the Editor:

I thank Dr. Pham Dang for his kind comments regarding our work on lipid infusion and for calling my attention to the literature supporting the use of clonidine in bupivacaine toxicity.<sup>1</sup> I will include these citations in future reviews of the history of treating local-anesthetic toxicity. However, in a recent case of successful lipid rescue described by Zimmer and colleagues,<sup>2</sup> bupivacaine-induced symptoms of CNS excitation and arrhythmias persisted after treatment with intravenous clonidine but rapidly resolved after lipid-emulsion infusion. Nevertheless, I offer my sincere congratulations to Dr. Pham Dang for his case report, which underscores the importance of persisting in efforts to revive patients with bupivacaine toxicity.<sup>3</sup> Studies have shown that bupivacaine is actually an excellent cardioprotectant<sup>4,5</sup> and, therefore, with adequate CPR, recovery can be good, even after prolonged resuscitation. The important take home lesson: when treating local anesthetic toxicity, "Don't give up!"

Guy L. Weinberg, M.D.  
Department of Anesthesiology  
University of Illinois—Chicago  
Chicago, IL

### References

1. Pham Dang C. Clonidine in resuscitation of bupivacaine-related cardiac arrest. *Reg Anesth Pain Med* 2007;32:270-271.
2. Zimmer C, Piepenbrink K, Riest G, Peters J. Kardio- und neurotoxische Nebenwirkungen nach akzidenteller intravasaler Bupivacainapplikation Therapie mit Lidocain, Propofol und Lipidemulsion. *Der Anaesthesist* 2007; ePub (in press).
3. Pham Dang C, Beaumont S, Floch H, Bodin J, Winer A, Pinaud M. Acute toxic accident following lumbar plexus block with bupivacaine. *Ann Fr. Anesth Réanim* 2000;19:356-359.
4. Ross JD, Ripper R, Law WR, Massad M, Murphy P, Edelman L, Conlon B, Feinstein DL, Palmer JW, DiGregorio G, Weinberg GL. Adding bupivacaine to high-potassium cardioplegia improves function and reduces cellular damage of rat isolated hearts after prolonged, cold storage. *Anesthesiology* 2006;105:746-752.

5. Weinberg G, Paisanthasan C, Feinstein D, Hoffman W. The effect of bupivacaine on myocardial tissue hypoxia and acidosis during ventricular fibrillation. *Anesth Analg* 2004; 98:790-795.

Accepted for publication January 27, 2007.  
doi:10.1016/j.rapm.2007.01.004

## Prolonged Femoral Nerve Palsy After Ilio-Inguinal Nerve Block

### To the Editor:

A 63-year-old male presented for a right inguinal hernia repair as a day case. After induction of general anesthesia, 20 mL of 0.5% plain bupivacaine was injected at a point medial and inferior to the right anterior superior iliac spine. Gentle pressure superior to the injection point was applied to encourage the local-anesthetic spread toward the ilio-inguinal nerve.

The operation was uneventful, and the patient was discharged from the recovery area to the day-case unit. Four hours later, the patient could not bear weight on his feet and could not be discharged home. On examination a dense motor paresis to the right quadriceps muscle was present, with weak hip flexion and knee extension. An area of anesthesia was detected at the inner aspect of the thigh in the distribution of L1 to L3 dermatomes. The diagnosis of right femoral nerve palsy was confirmed. The patient was admitted overnight for observation at intervals of 4 to 6 hours. Regular improvement in motor power was reported, with complete recovery 36 hours later.

Femoral nerve palsy after ilio-inguinal nerve block is a rare but recognized complication. We believe that the relatively large volume of the higher concentration of 0.5% bupivacaine, together with the pressure applied superior to the injection point, had contributed to the dense and prolonged block. The anatomic basis of the spread of local anaesthetic to the femoral nerve has been studied in cadavers.<sup>1</sup> Given limited bed availability, a 2-night admission on a planned day surgery is unfortunate.

We have now changed our technique to superficial infiltration using 10 mL of 0.25% plain bupivacaine, and we also ask the surgeons to infiltrate the deeper layers and the ilio-inguinal nerve under direct vision.

Y. Salib, F.R.C.A.  
P. K. Kukreja, M.B.B.S.  
M. K. Parikh, M.D.  
Staffordshire General Hospital  
Stafford, United Kingdom

### Reference

1. Rosario DJ, Jacob S, Luntley J, Skinner PP, Raftery AT. Mechanism of femoral nerve palsy complicating percutaneous ilio-inguinal nerve block. *Br J Anaesth* 1997;78:314-316.

Accepted for publication February 02, 2007.  
doi:10.1016/j.rapm.2007.02.002