

## Levobupivacaine A Viewpoint by Daniel Burke

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Several factors are influential when determining the choice of local anaesthetic to be used to provide effective anaesthesia and analgesia. These include the expected duration of the surgical procedure and the requirement for postoperative analgesia. Of primary concern, however, is patient safety. Lidocaine has the highest therapeutic margin of the currently available local anaesthetics, but has a short duration of action. Repeated administration results in tachyphylaxis. For more prolonged procedures, bupivacaine is commonly used. However, cardiovascular collapse resulting from accidental intravenous administration can be difficult to reverse and may be fatal. It is well recognised that this can occur even in experienced hands following a wide variety of procedures.<sup>[1]</sup>

More than half the drugs commonly used in anaesthetic practice are chiral compounds, including bupivacaine.<sup>[2]</sup> Progress in chemical technol-

ogy has greatly simplified the separation and preparation of individual stereoisomers, as exemplified by the introduction of ropivacaine and now levobupivacaine. This offers the opportunity to produce effective long lasting analgesia with an enhanced margin for safety. This may be of particular benefit in obstetric patients in whom engorgement of the epidural venous plexus increases the likelihood of inadvertent intravascular injection, and when resuscitative attempts may be particularly difficult because of veno-caval compression and airways difficulties.

While the introduction of a new local anaesthetic agent with equivalent potency and an improved cardiotoxicity profile is to be welcomed, fractionation of dose administration and continual patient observation is the mainstay of preventing a catastrophe. ▲

## References

1. Checketts MR, Wildsmith JAW. Accidental i.v. injection of local anaesthetics: an avoidable event? *Br J Anaesth* 1998; 80: 710-1
2. Calvey TN. Chirality in anaesthesia. *Anaesthesia* 1992; 47: 93-4