administration of local infiltration analgesia (LIA) in that particular case. LIA is simple, safe and effective for analgesia after knee and hip surgery. LIA has been proven at least in five randomised studies to be safe and efficient in reducing post-operative pain after Total knee artroplasty.<sup>[2-6]</sup>

Broadly, the LIA technique has four components:<sup>[7]</sup>
(1) the drug mixture, (2) the injection technique,
(3) an intraarticular catheter and (4) the application of a compression bandage.

Firstly, in terms of choice of drug mixture, a high-volume (150–170 mL) injectant mixture consisting of dilute local anaesthetic, either 0.2% ropivacaine or 0.125% levobupivacaine with ketorolac and adrenaline is used. The doses are usually reduced in elderly patients having significant comorbidities.

Secondly, the injection technique should be systematic and include injection into all tissues involved during surgery. The injection is made in three stages using 50-mL syringes. The first injection is into the tissues around the posterior capsule before inserting the components. The second one is injected into deep tissues around the medial and lateral collateral ligaments and wound edges. The third injection is made into the subcutaneous tissue. Usually, these injections are spread over about 1 h hence keeping the blood levels of local anaesthetic to a minimum.

Thirdly, an intraarticular catheter is inserted by the surgeon, preferably near the posterior aspect of the joint capsule and a further 15 mL of drug mixture is injected. The wound catheter is reserved for future injections.

Lastly, a compression bandage is applied to reduce degradation and slow the diffusion of the local anaesthetic into the bloodstream.

It was unfortunate that the basic principles of LIA were not adhered to in that particular near-fatal case. Instead, the drug mixture consisting of high-concentration local anaesthetic and adrenaline was injected in a single shot.

With the increasing influence of evidence-based medicine, such practices that compromise patient safety need to be looked at seriously.

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## Local infiltration analgesia following total knee arthroplasty

Sir.

I read with interest the article written by Kakar *et al.*<sup>[1]</sup> about their experience with a hazardous post-operative analgesia regime following total knee replacement.

I have grave concerns regarding the technique of

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## **REFERENCES**

- Kakar P, Gagrani V, Deshmukh U, Popli G. Post-operative analgesia regime following joint replacement. Indian J Anaesth 2011;55:305-6.
- Reilly KA, Beard DJ, Barker KL, Dodd CA, Price AJ, Murray DW. Efficacy of an accelerated recovery protocol for Oxford unicompartmental knee arthroplasty—a randomised controlled trial. Knee 2005;12:351-7.
- Busch CA, Shore BJ, Bhandari R, Ganapathy S, MacDonald SJ, Bourne RB, et al. Efficacy of periarticular multimodal drug injection in total knee arthroplasty. A randomized trial. J Bone Joint Surg Am 2006;88:959-63.
- Vendittoli PA, Makinen P, Drolet P, Lavigne M, Fallaha M, Guertin MC, et al. A multimodal analgesia protocol for total knee arthroplasty. A randomized, controlled study. J Bone Joint Surg Am 2006;88:282-9.
- Andersen LO, Husted H, Otte KS, Kristensen BB, Kehlet H. High-volume infiltration analgesia in total knee arthroplasty: A randomized, double-blind, placebo-controlled trial. Acta Anaesthesiol Scand 2008;52:1331-5.
- Toftdahl K, Nikolajsen L, Haraldsted V, Madsen F, Tonnesen EK, Soballe K. Comparison of peri- and intraarticular analgesia with femoral nerve block after total knee arthroplasty: A randomized clinical trial. Acta Orthop 2007;78:172-9.
- Andersen LØ, Husted H, Otte KS, Kristensen BB, Kehlet HA. Compression bandage improves local infiltration analgesia in total knee arthroplasty. Acta Orthop 2008;79:806-11.

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