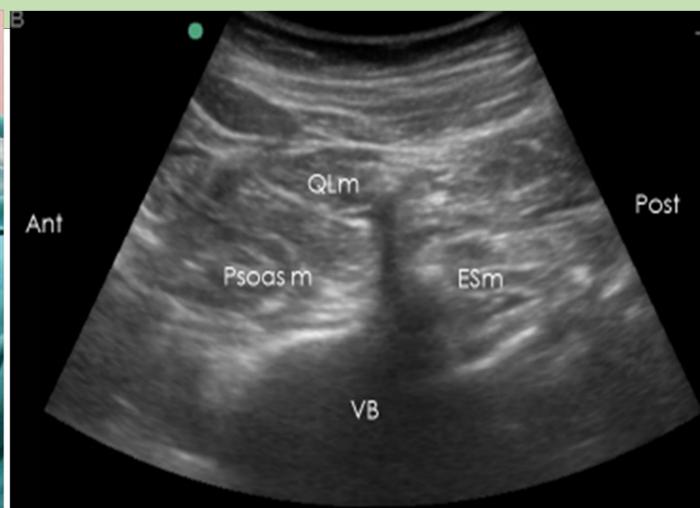


BACKGROUND

Successful use of Quadratus Lumborum Block (QLB) as an analgesic modality have been reported previously.¹⁻² To the best of our knowledge, none has explored clinical efficacy of its use as an anesthetic technique for any type of surgery. We would like to report a series where QLB were performed as the primary anesthetic technique for adult inguinal hernioplasty.

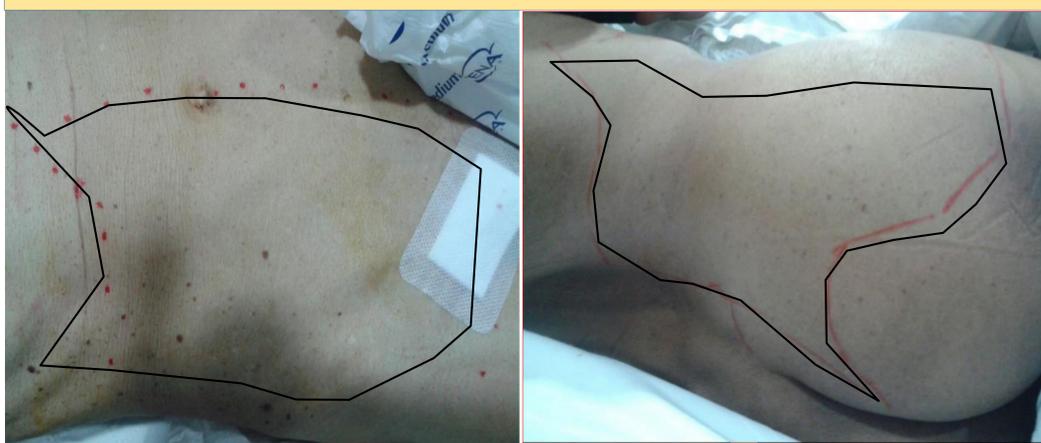
CASE REPORT

We recruited patients planned for elective hernioplasty, who consented for regional block (QLB), and had no contraindications to both regional anaesthetic technique and drugs used. We performed QLB based on the Transmuscular (TmQLB) technique described by Borglum². With patient in lateral position, a low frequency (5-2MHz) curvi-linear Sonosite M-Turbo (Bothell,WA,USA) transducer was positioned midway between the costal margin and iliac crest, to visualize the tip of transverse process (the stem of "Shamrock" leaf) with the immediate muscle above being Quadratus Lumborum (QL). Thirty (30) ml of 0.5% ropivacaine was deposited in the plane between Psoas major and QL muscles. Dermatomal sensory block was assessed to cold sensation and area of reduced sensation was mapped.



Findings

Upon testing to cold sensation, consistent sensory block from T6 to L1 levels were achieved in 3 out of 4 patients, while in another patient, block was from T10 to L1.



In all cases, a small volume of supplementary local anesthetics were administered over the skin and subcutaneous tissue (3- 5 ml) but none were required beyond this layer until the end of surgery. All cases were successfully performed under Monitored Sedation with target-controlled infusion (TCI) requiring effect-site propofol concentration of between 0.5 to 2.5 ng/ml.

Discussion

With regard to clinical spread, TmQLB had dermatomal distribution from T7 to L1. Borglum concluded that TmQLB gives better block dynamics in terms of providing faster onset without compromising clinical efficacy compared to Blanco Block, and as efficacious as a Thoracic Paravertebral Block looking at the onset and clinical profile.

Vasanth et al used 20 to 25 ml of 0.5% Ropivacaine in his two case reports as analgesia for abdominal surgery and reported a dermatomal spread from T8-L1.¹ Volumes corresponded to per weight of 0.3 ml/kg and suggested that volume increment to 0.6 ml/kg would be necessary to obtain a wider sensory block. Based on these reasons, we delivered an injectate volume of 30 ml using 0.5% Ropivacaine.

The low requirement for propofol was within the therapeutic range for sedation and NOT for anaesthesia. It was also very unlikely that the minimal dose of local anaesthetic infiltration given would allow for completion of the procedure possible. Surgical operating conditions were also obtained in terms of relaxation and ease of surgical manipulation and was found to be comparable to a subarachnoid block even during manipulation of visceral structures. These suggested that it was in fact the QLB, and not local infiltration, nor sedation, that was primarily the main anaesthetic component that determined successful completion of surgery

Conclusion

We conclude that QLB is a feasible alternative as a primary anaesthetic technique when combined with sedation for adult hernioplasty surgery. More studies are required to further evaluate the effectiveness and safety of this technique.

References

- 1.Vasanth Rao K. Ultrasound –guided quadratus lumborum block as a postoperative analgesic technique for laparotomy. *Journal of Anaesthesiology Clinical Pharmacology* 2013; **29** (4): 550-552.
- 2.Borglum J, Ultrasound-guided Quadratus Lumborum block : The best in abdominal surgery?. *DARA/ESRA Nedeland Zone Meeting 2013*