

BACKGROUND

Regional anesthesia is a great option for patients who are poor candidates for general or neuraxial anesthesia due to significant cardiac comorbidities

Managing severe tricuspid regurgitation (TR) requires maintaining a normal to high heart rate (HR) and normal to high preload, which may complicate aortic stenosis (AS)

Lumbar plexus block (LPB) provides good anesthetic coverage, but controversies remain about its safety

CASE DESCRIPTION

88-year-old man with complex history including HTN, HLD, CKD2, pancreatic CA s/p Whipple, afib on warfarin, complete heart block s/p PPM, and R periprosthetic femur fracture complicated by hardware infection who presented for explant of the infected hardware

TEE revealed LVEF 50%, moderate AS, severe TR, and moderate pulmonary hypertension

The anesthesiology team opted for a lumbar plexus block (LPB) as primary anesthetic and subgluteal sciatic block to supplement

Warfarin was held and blocks were performed using landmark and nerve stimulation techniques with ultrasound assistance. He tolerated the block with small doses of fentanyl and midazolam, underwent surgery with a dexmedetomidine drip, and required no blood pressure support throughout the surgery

FIGURES

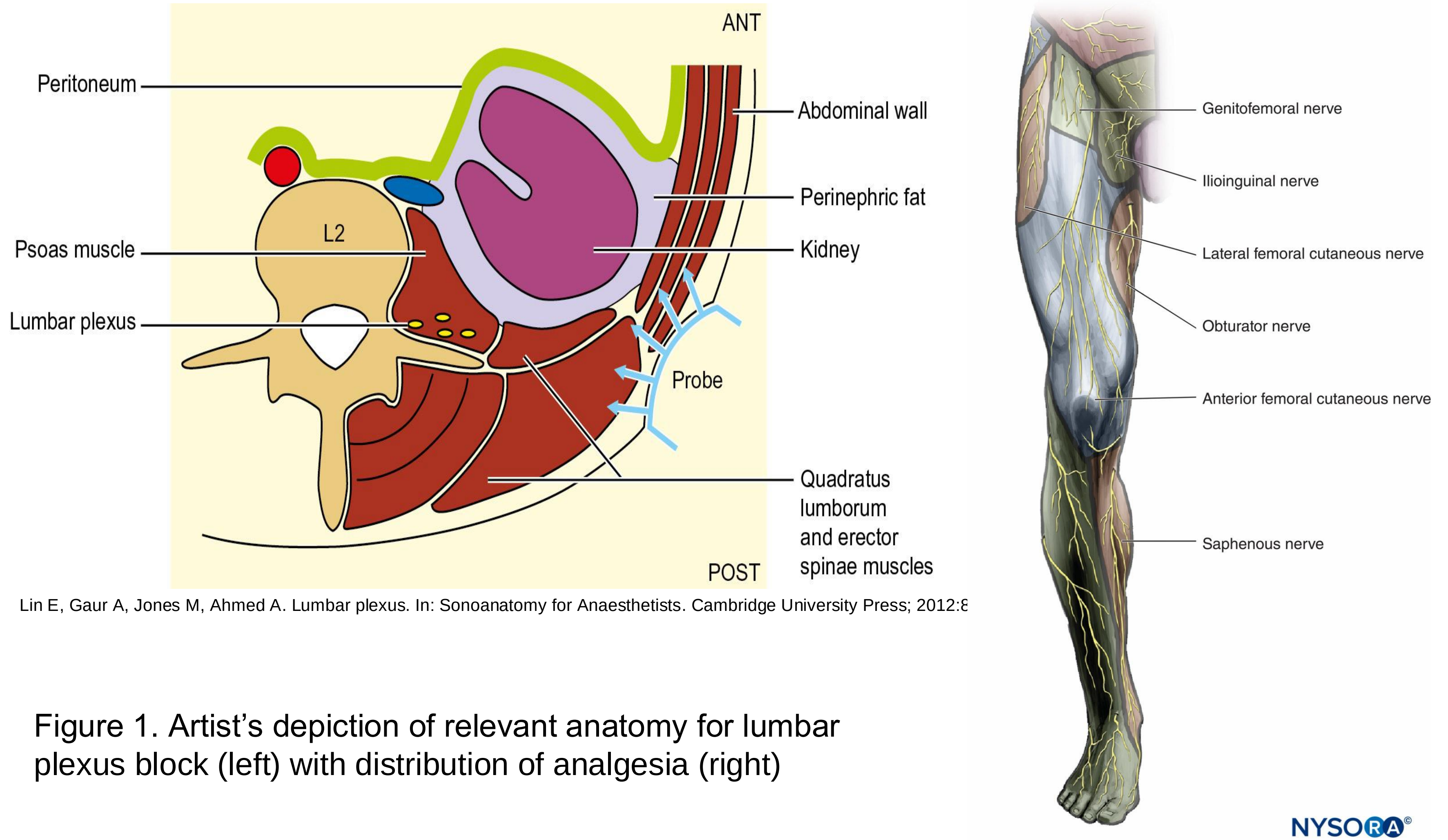


Figure 1. Artist’s depiction of relevant anatomy for lumbar plexus block (left) with distribution of analgesia (right)

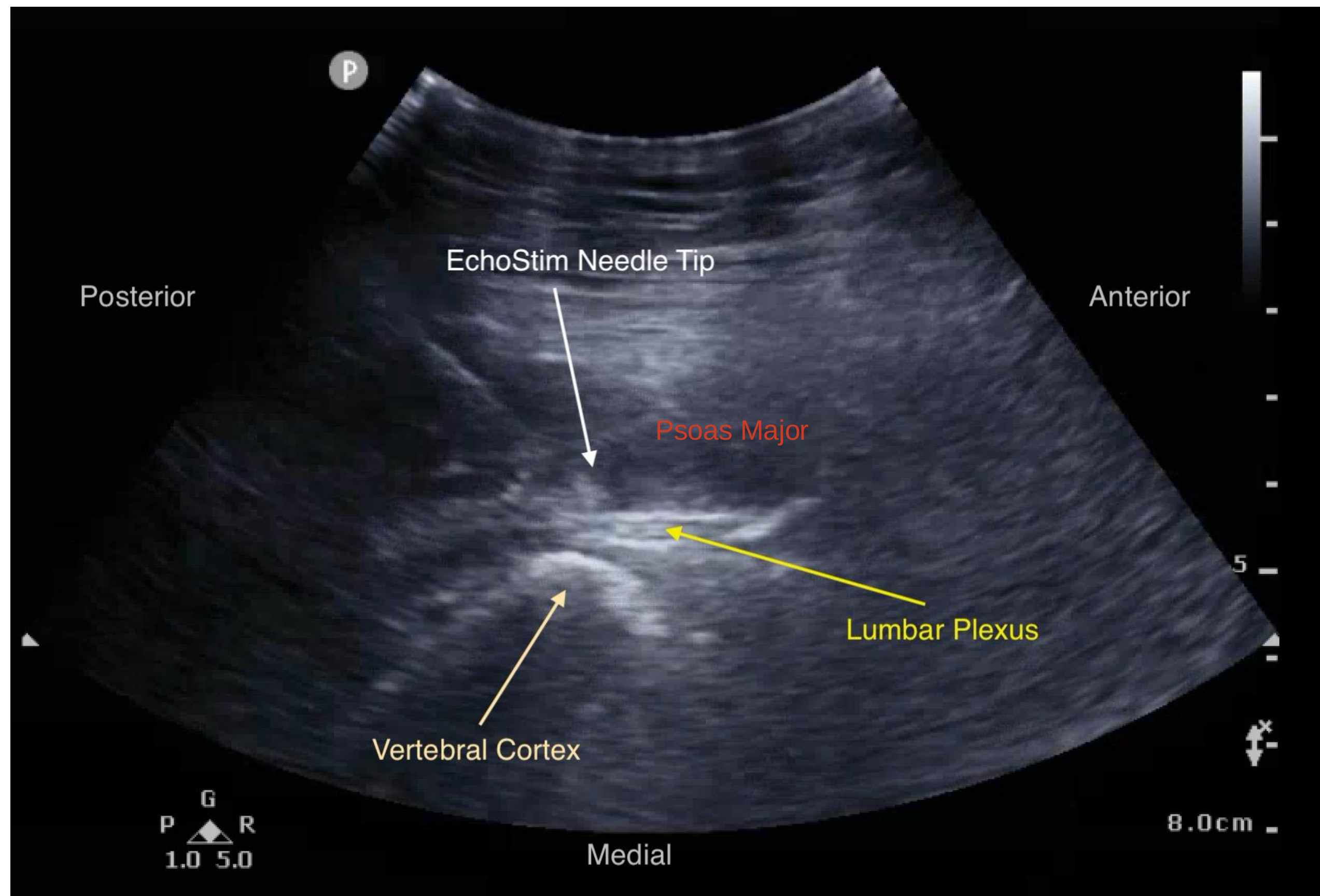


Figure 2. Ultrasound image showing the lumbar plexus block approach in this patient

DISCUSSION

Regional techniques like LPB may serve as effective anesthetics when general or neuraxial anesthesia is high risk

LPB has historically been associated with high incidence of complications, including intrathecal/epidural spread, retroperitoneal hematoma, and renal subcapsular hematoma, primarily stemming from one study¹

Familiarity with safe block techniques is essential. Intrathecal/epidural spread is linked to a cephalad and medial needle trajectory, while retroperitoneal hematoma risk decreases when following ASRA’s “Deep Blocks” guidelines²

The inferior pole of the kidney terminates at L3, suggesting an L4 approach reduces complication risks³

CONCLUSIONS

With a thorough understanding of anatomy and proper technique, anesthesiologists can perform LPB with less risk for complications

LPB can be considered as the primary anesthetic especially when general or neuraxial anesthesia poses significant risk

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