Continuous Thoracolumbar Fascia Block, a new promising regional anesthesia technique for analgesia in major spinal surgery

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Background

Spinal surgical procedures, including posterior lumbar interbody fusion and oncological spinal surgery, are associated with severe postoperative pain. To enhance early functional outcome, adequate pain management is paramount. However, the use of loco regional anaesthesia techniques still seems controversial as hard evidence is lacking. In our hospital wound infiltration with local anaesthetics and multimodal analgesic low opioid approach for these procedures are routine.

Aim

Our hypothesis was that continuous administration of local anaesthetics simply administered under the posterior thoracolumbar fascia (TLF block) might result in improved analgesia, reduction of opioid use and earlier mobilization.

Methods

After ethics approval we retrospectively analysed three patients who underwent major spinal surgery in whom post procedure wound infiltration catheters parallel to the wound, just below the thoracolumbar fascia were placed using a blind, loss of resistance technique. Primary outcome measures were ASA classification, NRS scores, PONV-scores, opioid use and time to full mobilization.

Results

Three patients could be identified (M/F=2/1, ASA II/III=2/1, age 72.3 y (range 69-74)). The VAS scores are shown in table 1. Opioid consumption is shown in table 2. No patients showed PONV. Full mobilization was achieved at day 1 in two patients and at day 3 in one patient. There were no 30-days readmissions or re-operations reported.

patient	1		2		3	
	nrs	opioids	nrs	Opioids	nrs	opioids
Day -1	3	0	6	0	0	0
Day 0	0	0	3.5 (3-4)	0	2	0
Day 1	0	0	2.8 (1-4)	10*	0.8 (0-2)	0
Day 2	0	0	5.3 (3-7)	25	0.2 (0-1)	0
Day 3	0	0	3.5 (2-5)	25	0.2 (0-1)	0
* Catheter accidentally removed by patient						

Table 1: NRS scores and opioid use (Oxycodone daily dose in mg) (mean and range)

Discussion and Conclusion

The use of a continuous thoracolumbar fascia (TLF) block led to low pain scores, reduced time to mobilization and low opioid use in the first four days after the procedure. Continuous TLF block may be a promising new technique for enhanced recovery after major spinal surgery.