Evaluation of Ultrasound-Guided Transversus Abdominis Plane Block versus Quadratus Lumborum Block as preemptive analgesia for Inguinal Hernia Repair Surgeries

Objective: to evaluate of effect ultrasound-guided transversus abdominis plane block versus quadratus lumborum block as preemptive analgesia.

Background: Ultrasound guided Quadratus lumborum block is a new technique of regional analgesia.

Subjects and Methods: A prospective randomized study was conducted on 56 patients with ASA I or II physical status who were undergoing elective unilateral inguinal hernia repair surgery attended to general surgery department, Faculty of Medicine, Menoufia University during February till December 2018. Patients were divided into: Group T: included 28 patients who received ultrasound-guided TAP block with 20 ml of bupivacaine 0.25%. Group Q: included 28 patients who received ultrasound-guided QLB with 20 ml of bupivacaine 0.25%. Full history, routine, physical examination and hear rate, blood pressure was measured.

Results VAS values were at low levels and comparable between the groups T and Q. On admission to the PACU and at (30, 60, 90 and 120) minutes postoperative showed lower values in group Q with no significant difference ($P=0.089, 0.188, 1.00, 0.247$ respectively). Then the values started to rise and still comparable up Q at 3, 5, 6, 7, 12, 18, 20 and 24 hours postoperatively ($P<0.001, <0.001, <0.001, <0.001, <0.001, 0.035, 0.039, 0.043$ respectively). At T 4, 8, 10, 14, 16, 22, VAS values were comparable between the two studied groups with no significant difference ($P=0.051, 0.658, 0.520, 0.450, 0.079, 0.121$ respectively)..

Amount of fentanyl administered was significantly lower in group Q (P value <0.05).

Nnumber of patients needed additional doses of fentanyl were 10 in group T and 5 in group Q which is significantly lower than group T.

(P value <0.05)

Time for first analgesic request was significantly longer in group Q (P value <0.001).

Morphine requirements in the postoperative 24 hours is significantly lower in group Q (P value <0.001)

		Group T (N=28)	Group Q (N=28)	t. test	P value
Fentanyl use	Total amount of fentanyl used intra operative microgram	108.11±35.97	90.61±28.79	2.010	0.049*
	Number of Patient needed additional doses of fentanyl	10(35.71%)	5(17.86%)	X ² = 2.455	0.032*
TFAR post-operative (hours)		3.75±0.67	10.21±2.90	11.498	0.000*
Morphine requirements (mg) in the postoperative 24 hours		13.86±2.88	8.21±2.85	7.379	0.000*

Conclusions: in patients undergoing Inguinal Hernia Repair Surgeries, Quadratus lumborum block provided more effective intraoperative and postoperative analgesia with less intraoperative fentanyl consumption, less VAS for postoperative pain, a smaller number of patients needed analgesia after surgery and less postoperative morphine consumption

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