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PD07-03 COMPARISON OF PAIN SCORES AND RECOVERY AFTER PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH AND WITHOUT REGIONAL ANESTHESIA BLOCK.



- **COMPARISON OF PAIN SCORES AND RECOVERY AFTER PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH AND WITHOUT REGIONAL ANESTHESIA BLOCK. PROSPECTIVE RANDOMIZED CONTROLLED STUDY.**
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INTRODUCTION AND OBJECTIVES

- Achieving effective pain control is vital for early patient mobilization and eventually returning back to normal routine life following percutaneous nephrolithotomy (PCNL) surgeries.
- The use of an intraoperative local anesthetic or postoperative analgesic has been reported for pain control in PCNL.
- Transversus abdominis plane (TAP) block is a regional anesthetic technique applied in other surgeries under ultrasound guidance.
- The aim of our study was to see the effectiveness of this block on postoperative pain in PCNL.



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INTRODUCTION AND OBJECTIVES

- New persistent opioid use after surgery is common and is not significantly different between minor and major surgical procedures.

(Ref:-Brummet C M et al. JAMA Surg.2017 Jun 21;152(6):e170504.)

- Emergency Dept. Acute pain : opioid prescriptions may contribute to addiction in some patients.

(Ref:-Megam M et al. Ann Emerg Med. 2016 Aug;68(2):202-8.)

- New persistent opioid use represents a common but previously underappreciated surgical complication that warrants increased awareness.

(ref:-Hoppe JA et al. Ann Emerg Med.2015)

(ref:- Alam A et al.Arch Intern Med.2012.)



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METHODS

- Prospective, randomized, double-blinded study.
- It was carried out at PKLI since 2018 till September 2019.
- In group 1, patients didn't receive such block.
- The TAP block was administered to a total of 47 patients (group 2), who had undergone elective PCNL under General anesthesia.



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METHODS

- Postoperatively the pain level was measured using the visual analog scale (VAS) and Verbal Intensity Pain Scale (VIPS) at the postoperative 1, 2, 6, 12, 18, 24, 48 and 72 hours. The opioids consumptions was also noted if required.
- Postoperative pain intensity was measured by nurse and doctor in the recovery room and inpatient ward.
- Student t test was applied to see for statistically significant difference in mean pain scores between these groups.
- A mean pain score of less than 2 for each group was defined as satisfactory pain control.



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Results-1

Demographic Factors	Group 1 (No block used)	Group 2 (Block used)	P-value
No of patients	67	47	---
Male	51 (76.1%)	36 (76.5%)	1.0
Female	16 (23.9%)	11 (23.4%)	1.0
Mean Age	41.6±12.5	42.4±11.3	0.96
Mean Stone Size	3.1±0.9 cm	3.2±1.1 cm	0.94
Operative time	142±23 min	147±29 min	0.89
BMI	27.1	26.7	0.87



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Results-2

Demographic Factors	Group 1 (No block used)	Group 2 (Block used)	P-value
DM	6 (8.9%)	5 (10.6%)	0.75
HTN	8 (11.9%)	6 (12.7%)	1.0
IHD	0	0	---
Staghorn stones	7 (10.4%)	6 (12.7%)	0.76
Partial Staghorn	11 (16.4%)	7 (14.8%)	1.0
Chronic Body pain	0	0	---
History of prior PCNL	0	0	---



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Results-3

Post-op outcomes	Group 1 (No block used)	Group 2 (Block used)	P-value
Pain @ 2 hours	5.1	3.9	0.01
Pain @ 6 hours	4.6	3.6	0.25
Pain @ 12 hours	3.7	2.8	0.29
Pain @ 24 hours	2.9	1.8	0.04
Satisfactory pain control	55/67 (82.1%)	44/47 (93%)	0.03
Need opioid analgesic	12 (17.9%)	2 (4.2%)	0.04
Nephrostomy tube	1.4 days	1.1 days	0.08



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Discussion

- Many methods have been investigated recently such as Erector spinae plane block (ESPB) that has significant pain relief after PCNL.
- Randomized controlled trials evaluating ESPB for PCNL have found lower VAS, opioid requirements and adjunct analgesic consumptions.
- Quadratus lumborum block (QLB) is another addition recently for postoperative PCNL pain control.
- Randomized studies showed that QLB reduced VAS pain score. More over, opioid consumption was much reduced as compared to intravenous analgesic regimens.



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Discussion

- In past these regional blocks have not been studied much.
- Possible benefits of the TAP block include its ease to perform it, reduction of postoperative opioid needs.
- It can be performed even in patients under anticoagulant therapy or with coagulopathies.
- More studies will be required to determine the analgesic efficacy of TAP block for post PCNL pain control assessment .



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Conclusion

- The TAP block was observed to be effective in pain control.
- It resulted in reducing the opioid use during the postoperative 48 hours follow-up after PCNL.
- It may help in avoiding the use of opioids keeping in view the opioid epidemic challenges nowadays.
- Early mobilization and early orally tolerating might make early discharge possible owing to adequate pain relief.



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THANKS