Efficacy of Ultrasound-guided Transversus Abdominis Plane (TAP) block for reducing post-operative pain and peri-operative analgesic requirement in patients undergoing lower abdominal surgery

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INTRODUCTION :

- Abdominal surgeries tend to be one of the most painful among all types of surgeries
- Ultrasound-guided TAP block helps deposit local anaesthetic between the internal oblique and transversus abdominis muscles (TAP) and helps block the sensory nerves of the anterior abdominal wall [T7-L1]
- Its role as a part of multimodal analgesic technique for gynaecological abdominal surgeries needs to be clearly defined

METHODOLOGY

Observations

Perioperative fentanyl requirement
postoperative VAS scores at rest and on movement
Rescue analgesic requirement
Sedation scores
Patient satisfaction
Study related complications

Statistics

Analysis of quantitative data between the two groups was done using unpaired student t test or ANOVA test.
Analysis of qualitative data was performed by Chi square test or Fishers exact test
p value <0.05 - result statistically significant

RESULTS

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Bolus dosing of fentanyl PCA was lower at 4 hours ($p<0.017$) and 8 hours ($p<0.039$) in group R

Total post-operative fentanyl requirement at various intervals upto 48 hours was not significant as monitored by PCA pump

Sedation scores were lower in ropivacaine group in the immediate post-operative period ($p<0.001$)

Patient satisfaction was better in ropivacaine group

No study related complications

DISCUSSION :

- Findings of decrease in intraoperative fentanyl requirement and maintenance of hemodynamic parameters were also reported by Bhattacherjee et al¹.
- Meta-analysis done by M. Baeriswyl et al² demonstrated that TAP block reduces IV opioid consumption for 24 hours and pain scores at rest and movement for 6 hours postoperatively
- Reduced postoperative VAS scores and opioid requirement was shown by Carney et al. and McDonnell et al³.
- Lower postoperative rescue analgesic requirement were consistent with study done by Gajanan et al⁴. and Amr et al⁵

CONCLUSION-TAP BLOCK

Reduces intra-operative fentanyl requirement

Provides superior postoperative analgesia up to 24 hours

Reduces post-operative rescue analgesic requirement

Better patient satisfaction

Safe technique when performed under USG guidance with minimal side effects

Component of multimodal analgesic regimen

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