

TAP Blocks for ALIF: Preliminary Data Set

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Background

Anterior Lumbar Interbody Fusion (ALIF) is a technique where an incision is made in the lower abdomen and the abdominal muscles and contents are retracted to allow access to the spine. This approach has the advantage of sparing the muscles and nerves of the back, as well as allowing the placement of bone grafts anterior to the spine, where it is in compression and tends to fuse better.¹

Good post-operative analgesia is important to decrease the stress response,² maintain respiratory function and improve patient satisfaction. Transversus Abdominis Plane (TAP) blocks are used to provide analgesia to the anterolateral abdominal wall after a variety of lower abdominal incision surgeries, such as hysterectomies.³

The aim of this audit was to determine whether the use of TAP blocks reduces post-operative pain and analgesic requirements, compared with local anaesthetic infiltration.

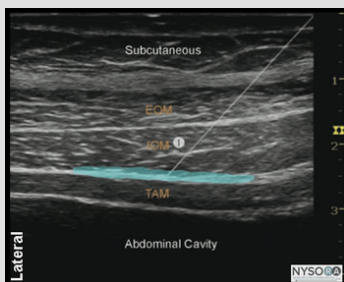
Methods

We retrospectively identified patients who had undergone an ALIF procedure in the previous 6 months. Using a proforma, we gathered data on pain scores, analgesia used and presence of post operative nausea and vomiting in the first 24 hours following surgery.

TAP Blocks

TAP blocks involve infiltrating local anaesthetic into the space between the internal oblique and the transversus abdominus muscles in the lower abdomen, either via ultrasound guidance or via direct surgical visualisation.

The block requires a high volume of local anaesthetic and all patients in our audit received 40ml of 0.25% or 0.375% levobupivacaine divided across both sides.



Visualisation of the transversus abdominis plane on ultrasound imaging.⁴

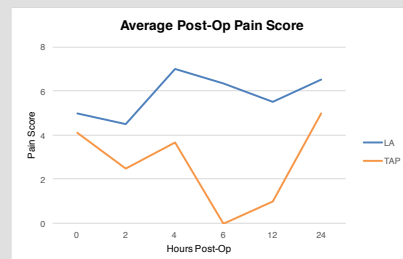
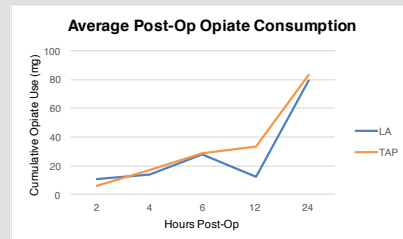
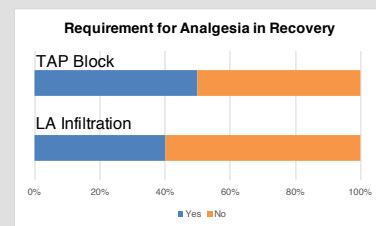
References

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2. Greisen J, Juhl CB, Grotte T, Vilstrup H, Jensen TS, Schmitz O. Acute pain induces insulin resistance in humans. *Anesthesiology* 2001; 95: 578-84.
3. Carney J, McDonnell JG, Ochana A, Bhinder R, Laffey JG. The transversus abdominis plane block provides effective postoperative analgesia in patients undergoing total abdominal hysterectomy. *Anesth Analg.* 2008;107:2056-60.
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Results

Total no. of patients: 13 (3 male, 10 female)
Age range: 23 - 71 years old.
Groups: LA Infiltration (5), TAP Block (8)

Analgesia requirements in recovery (morphine, oxycodone and ketamine) were similar. Equally, average opiate use over the first 24 hour post-operative period was the same across both groups. The average total opiate use at 24 hours was 79.6mg in the local anaesthetic infiltration group and 82.7mg in the TAP block group.



No patients in either group complained of nausea or vomiting.

Conclusions

No difference was found in analgesic requirements in recovery or average opiate consumption in the first 24 hours post surgery between the two groups. Despite this, the group receiving TAP blocks showed lower average pain scores in the first 24 hours post surgery.

The lack of difference in analgesia requirements between the two groups may be due to the low number of patients in this preliminary study set. Patient heterogeneity or variation in block technique may also confound these results.

A larger prospective audit has been planned which will allow objective evaluation of the benefits of this technique in patients undergoing an ALIF procedure.