



Does TAP Block Timing Matter? Block Timing, Postoperative Pain & Opioid Use After Robotic Surgery

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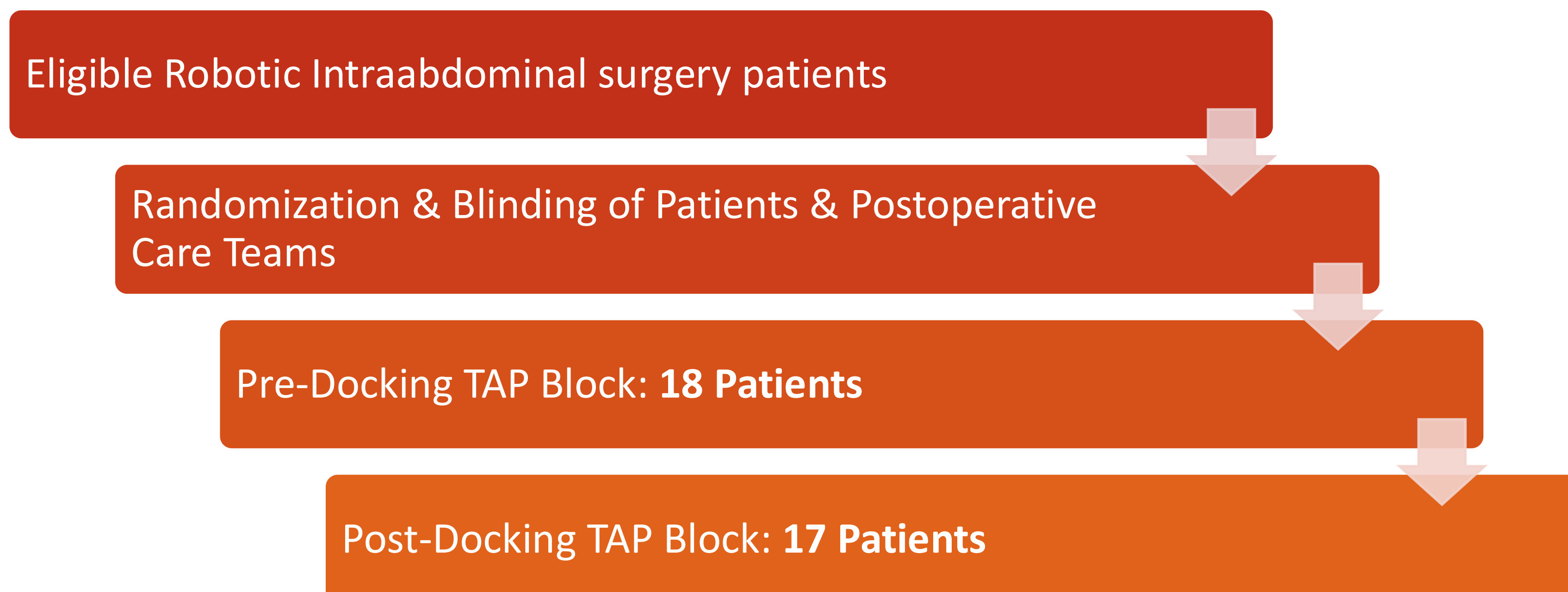
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BACKGROUND

- Local anesthetic between the internal oblique & transversus abdominis muscles, blocking somatic afferents of the anterior abdominal wall
- Cornerstone of **multimodal analgesia** in robotic intraabdominal surgery, limiting systemic opioid requirements and associated adverse effects
- The **optimal timing** of TAP block administration relative to robotic docking has been debated
- Earlier block placement may allow peak anesthetic tissue concentration to coincide with **emergence from general anesthesia**

RESEARCH QUESTION

- Does TAP block placement **before** robot docking reduce postoperative pain and opioid consumption compared to placement **after** undocking?



METHODS

- No modifications to **standard perioperative care**, anesthetic, or analgesic protocol
- Pain via standardized **NRS** (0-10) at 1, 3, 6, 24, and 48 hours postoperatively
- Opioid use as total **hydromorphone equivalents** (mg) per interval
- Statistics: Mann-Whitney U test

RESULTS

- Groups **Well-Matched**
 - No significant difference in age (57 vs. 47 yrs, p=0.06) or BMI (32.0 vs. 32.6 kg/m², p=0.81). Female sex 51% overall (n=18).
- **Pain scores were similar** between groups at all time points; no differences reached statistical significance:
 - 1 hour: 2.4±3.3 vs. 3.5±3.6
 - 3 hours: 1.9±3.1 vs. 1.4±2.2
 - 6 hours: 2.1±3.5 vs. 2.5±3.6
 - 24 hours: 4.0±3.7 vs. 2.2±2.9
 - 48 hours: 4.0±3.7 vs. 4.7±4.2
- Hydromorphone use (pre-docking vs. post-docking):
 - 1 hour: 0.089±0.18 vs. 0.28±0.31mg (p=0.04)
 - Lower in the post-docking group at all subsequent time points (p=>0.05)

Pre-docking TAP Block reduced opioid use by

68%

1-hour post-op (0.089 vs. 0.28 mg; p = 0.04).

DISCUSSION

- Pre-docking TAP **block reduced immediate hydromorphone** use, but this did not persist beyond 1 hour
- Pain scores were comparable at all time points between groups

LIMITATIONS

- Small sample size (n=35); single institution; mixed procedure types

CONCLUSION & FUTURE DIRECTIONS

- Timing of TAP block influences immediate but not sustained postoperative opioid use
- Ongoing enrollment will enable subgroup analysis and incorporation of total intraoperative anesthesia as a covariate to better characterize drivers of pain control and opioid consumption