

Analgesic efficacy of transversalis fascia plane block for post-caesarean pain management: A systematic review and meta-analysis

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- Pain following caesarean section delivery is a complex experience and can cause fear, anxiety, and frustration
- Multimodal analgesic strategies, including neuraxial opioids, nonopioid analgesics, and regional blocks, have shown promise in optimizing pain relief while minimizing side effects.
- Truncal nerve blocks, such as the Transversalis Fascia Plane (TFP) block has emerged as a promising technique for post-caesarean pain management.

Objective: To determine the efficacy and safety of the TFP block in reducing pain after caesarean section.

Study Design and Methods

- **Searched:** MEDLINE, EMBASE, and unpublished sources from inception to May 2024
- **Study Selection:** We included all randomized controlled trials investigating TFP block versus any comparator for post- caesarean pain management.
- **Risk of Bias and Quality of Evidence:** We used the modified Cochrane Risk of Bias (Version 2.0) tool and the GRADE framework
- **Data Analysis:** We performed random-effects meta-analysis

Results

- 8 eligible RCTs (n=641)
- **Compared to control, the TFP block decreased**
 - **postoperative opioid consumption at 24 hours** [MD=-13.03 mg IV morphine equivalent, 95% CI – 20.49, - 5.57, p=0.0004, n=3, moderate certainty]
 - **post-operative pain on movement at 12 hours** [SMD=-0.51 95% CI – 0.78, -0.23, p=0.0003, n=3, low certainty]. No difference in postoperative pain at rest or on movement at 1, 6, and 24 hours vs control
 - **time to rescue analgesia** [MD=8.36 hours, 95% CI 3.45, 13.27, p=0.0008, n=3, moderate certainty]
 - **need for rescue analgesia** [RR=0.44, 95% CI 0.22, 0.99, p=0.0464, very low certainty].
- No difference in time to rescue analgesia TFP block vs transversalis abdominous plane (TAP) or quadratus lumborum block.
- Uncertain impact TFP vs any other comparator: postoperative opioid consumption at any other timepoint, pain at rest and during movement at any other time point, quality of recovery, patient satisfaction and postoperative NSAID needs

Comparison	Number of Studies
TFP vs Control	5
TFP vs TAP	3
TFP vs QL	1

Conclusion and Discussion

- Compared to control, the TFP block improved postoperative opioid consumption at 24 hours, time to rescue analgesia, and need for rescue analgesia. There was no difference in pain at rest or on movement at all timepoints except for on movement at 12 hours.
- There was no difference in time to rescue analgesia compared to the TAP or quadratus lumborum block.
- More RCTs that evaluate the impact of TFP blocks versus other truncal nerve blocks on other important clinical outcomes are needed.