

Echo-guided Continuous Thoracic Paravertebral Block (TPVB) Vs Echo-guided Transversus Abdominis Plane (TAP) Block in unilateral abdominal surgery: a double-blind randomized controlled trial.

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Introduction. Nerve blocks of the abdominal wall represent an innovation in the field of regional anesthesia in abdominal surgery. Recent clinical studies have shown that TAP block, in combination with general anesthesia, provides sufficient and lasting postoperative pain relief after abdominal surgery. Similarly, TPVB has been shown to be effective in ensuring good postoperative analgesia in patients undergoing abdominal surgery. Of all the locoregional blocking techniques, TPVB appears to be a promising analgesic technique for abdominal surgery in terms of efficacy and safety. **Material and Methods.** Well-designed studies with adequate power are needed to confirm TPVB usefulness and this is why we propose this interventional, controlled, randomized, double-blind study in order to evaluate its efficacy compared to placebo and TAP block. The study was performed at Sant'Orsola-Malpighi Hospital in Bologna enrolling patients who underwent single-sided abdominal elective surgery. **Result.** 89 patients were randomized into four groups: TAP with drug (n = 21), TAP with placebo (n = 23), TPVB with drug (n = 22) and TPVB with placebo (n = 23). Regarding the primary outcome and, therefore, the reduction of pain an hour after the end of the surgery (Figure 1) the NRS for TPVB with drug was lower than the three other groups, but this result is statistically significant only within TPVB with placebo (p-value=0.0002). The TPVB group with drug required less rescue dose at 4 hours (9%) compared to drug TAP with drug (19%). The need for intra-operative opioids was significantly reduced for drug TPVB compared with drug TAP group (p-value=0.02). No significant differences were observed between the different groups for complications and hospital length of stay. In conclusion, this is the first work on the subject conformed as a RCT: the results are promising, also considering the study design and the need for adjustment for multiple tests.