The effect of morphine added to bupivacaine in ultrasound guided transversus abdominis plane (TAP) block for postoperative analgesia following lower abdominal cancer surgery, a randomized controlled study

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Abstract:

Objectives: Transversus abdominis plane (TAP) block used for management of surgical abdominal pain by injecting local anesthetics into the plane between the internal oblique and transversus abdominis muscles. We aimed to explore the effect of adding morphine to bupivacaine in ultrasound guided TAP-block in patients undergoing lower abdominal cancer surgery.

Study design: Randomized, double-blind, prospective study. Clinical trial identifier: NCT02566096. Setting: Academic medical center. Patients: Sixty patients were enrolled in this study after ethical committee approval. Interventions: Patients divided into 2 groups (30 each): Bupivacaine group (GB): given ultrasound guided TAPblock 20 ml 0.5% bupivacaine diluted in 20 ml saline; Morphine group (GM): given ultrasound guided TAPblock with 20 ml 0.5% bupivacaine + 10 mg morphine sulphate diluted in 20 ml saline. Measurements: Patients were observed for total morphine consumption, time for first request of rescue analgesia, sedation scores, hemodynamics and side effects for 24 h postoperatively. Results: Morphine added to bupivacaine in TAP block compared to bupivacaine alone reduced total morphine consumption (5.33 ± 1.28 mg) (10.70 ± 3.09 mg) respectively (p < 0.001), prolonged the time to first request of analgesia (10.40 ± 4.96 h) (6.97 ± 3.26 h) respectively (p < 0.008), with a statistically significant decrease in (VAS-M) in GM compared with GB at 12 h postoperatively (p < 0.002). No significant differences in hemodynamics, respiratory rate, oxygen saturation, sedation score, and side effects except for nausea were observed (p N 0.05). Conclusion: Addition of morphine to bupivacaine in TAP block is effective method for pain management in patients undergoing major abdominal cancer surgery without serious side effects

Keywords:

Morphine Bupivacaine TAP block Postoperative Pain Abdominal surgery

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