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Postoperative analgesia after electroacupuncture in inguinal hernia surgery with mesh

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Introduction: Post-operative pain after inguinal hernia surgery is attributed to surgical manipulation or placement of the preperitoneal mesh. Perioperative use of acupuncture can probably be a useful adjunct for postoperative analgesia.

Aim: The aim of this study was to evaluate the effect of EA in mesh inguinal hernia open repair using pain scales, anxiety questionnaire and the evaluation of pain with an algometer and measurements of stress hormones.

Methods & Participants: 54 male patients were included in the study (23 inguinal left and 31 with inguinal right, classification in ASA I-II) submitted in programmed mesh inguinal hernia open repair with the technique Lichtenstein. Investigation parameters included: 1) Pain scales (VAS, PPI, VRS, SS and FS) and the anxiety questionnaire at 30', 90', 10 hours and 24 hours postoperatively; 2) Pain threshold and tolerance were evaluated preoperatively, before and after electroacupuncture, and postoperatively at 30', 90', 10 hours and 24 hours after surgery; and 3) Blood levels of stress hormones cortisol, corticotropin and prolactin were measured at the same time points (excluding 24 hours). The frequency of complications of opiates was recorded. Patients were randomly allocated in 3 treatment groups of 18 patients. The three groups were: Group 1: placebo EA, Group 2: preoperative (40') and postoperative (60') EA, Group 3: preoperative, intraoperative and postoperative EA. The trial used low frequency EA of 2 Hz and frequency scanning mode. Needles were placed bilaterally at points of great analgesic effect. Electroacupuncture was applied to the points in pairs SP6-ST36; LI4-PC6; Shen-Men 55-Thalamus 26a. If the pain VAS score was greater than or equal to 3 cm within 90 minutes after surgery, an intravenous bolus dose of 5 mg pethidine was given and continuous intravenous infusion pump of pethidine at a rate of 10 mg/h was administered for 12 hours. If the levels of analgesia were not satisfactory, parecoxib at a dose of 40 mg was administered. Data were processed in SPSS 17.0 and appropriate statistical tests.

Results: Electroacupuncture groups showed lower scores on scales VAS, VRS and biggest decline in stress hormone levels as compared to the placebo group at 30', 90' and 10 hours postoperatively. There were no statistically significant differences between groups 2 and 3. In the left-operated, the evaluation with algometer showed higher pain threshold and tolerance to EA groups compared to the placebo group. Similarly, for right-operated statistically significant differences were observed at 30', 90', 10 hours and 24 hours postoperatively. In anxiety scale, the groups of real EA had less anxiety compared to the placebo group at 90' and 10 hours postoperatively. PPI questionnaire showed statistical differences at 10 hours; Faces scale at 30' and 90' postoperatively and satisfaction scale at all-time points, as the EA groups had a better analgesic effect.

Conclusion: Low frequency EA for post-operative pain following mesh inguinal hernia repair significantly reduced postoperative pain compared to placebo. Respectively, there was a decrease in stress hormones levels and anxiety. The acupuncture could be implemented into the clinical routine as a complementary method in the perioperative setting.

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Methadone for pain: What to do when the oral route is not available?

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Methadone has a unique and valuable role in chronic pain management and palliative care. When patients are dying, they often become unable to swallow. In many places methadone is only available in oral formulations, and may be discontinued towards end of life if prescribers are unaware of the alternative routes available for administration. This presentation will describe alternative routes of administration of methadone: rectal, transmucosal and transdermal, while emphasizing that good pain control achieved with methadone can be maintained until the time of death.

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