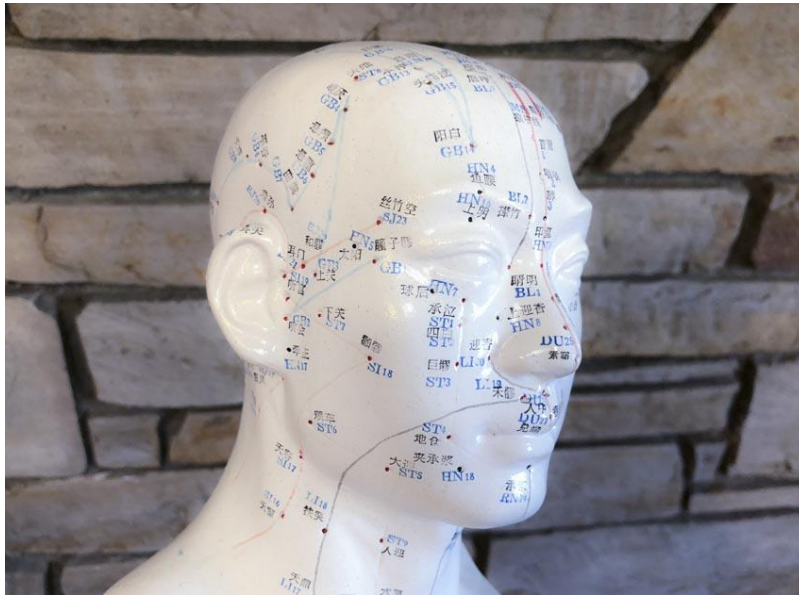


Acupuncture Found Effective for Postoperative Pain Relief

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Researchers conclude that acupuncture increases the effectiveness of epidural morphine analgesia for the relief of pain after intestinal cancer surgery.

Guangdong Provincial Hospital of Traditional Chinese Medicine researchers combined scalp acupuncture with epidural morphine analgesia in a controlled clinical trial. Patients receiving both epidural morphine analgesia

and scalp acupuncture in a combined pain management protocol after completion of intestinal cancer surgery showed significant improvements in visual analog scale (VAS) scores and Bruggman comfort scale (BCS) scores. The researchers documented another benefit of adding acupuncture to the pain management protocol. The addition of scalp acupuncture accelerated postoperative recovery of gastrointestinal functions.

The VAS and BCS scores demarcate significant improvements, measured at the 6 hour (T1), 12 hour (T2), 24 hour (T3), and 48 hour (T4) datapoints after completion of the operation. VAS is a measurement tool used to score the improvement of pain intensity. BCS is used to evaluate the postoperative comfort level. VAS scores at T1, T2, T3, and T4 in the patients of the acupuncture treatment group were all lower than those in the control group. The researchers note that “scalp acupuncture can serve as a preemptive analgesia technique and increase effectiveness of epidural morphine analgesia.” Pre-emptive analgesia is a treatment whereby a preoperative analgesic regimen is introduced to reduce noxious stimuli in the surgical process. BCS scores in the acupuncture group at T1, T2, T3, and T4 were all lower than those in the control group, indicating that scalp acupuncture is effective for postoperative discomfort relief.

The postoperative recovery of gastrointestinal functioning was recorded based on two parameters, the bowel recovery time and anal exhaust time. The average bowel sound recovery time of the acupuncture treatment group was 35.66 hours, while that of the control group was 58.44 hours. The acupuncture group outperformed the control group by 22.78 hours. The average anal exhaust time of the acupuncture treatment group was 49.34 hours, while that of the control group was 73.22 hours. The acupuncture group outperformed the control group by 23.88 hours. Both parameters demonstrate a significant difference after acupuncture treatment, indicating that scalp acupuncture facilitates the postoperative recovery of gastrointestinal functions.

Morphine is a common opioid analgesic in the postoperative period. While effective, the downside is that the medication may cause nausea, vomiting, constipation, lightheadedness, dizziness, drowsiness, increased sweating, and urinary retention. It may also cause respiratory depression and is contraindicated for patients with cardiopulmonary disease. [2] In addition, continued use or abuse of morphine can result in physical dependence and addiction. [3]

According to a published NIH (National Institutes of Health) Consensus Conference statement, acupuncture is recommended as a treatment for pain management. [4] In the Guangdong Provincial Hospital of Traditional Chinese Medicine study, acupuncture increases the effectiveness of epidural morphine analgesia by improving VAS and BCS scores and facilitates the postoperative recovery of gastrointestinal function. The finding is not an isolated occurrence. In a previous study, researchers (Chen et al.) note, “The addition of acupuncture therapy to epidural morphine analgesia in a clinical setting can reduce the total dosage of morphine and correspondingly eliminate the medication-induced side effect rate.” [5]

Design

Researchers (He et al.) from the Guangdong Provincial Hospital of Traditional Chinese Medicine implemented the following study design. A total of 60 patients that received intestinal cancer surgery under combined general/epidural anesthesia were treated and evaluated in this study. The patients received radical resection for colorectal cancer. They were randomly divided into an acupuncture treatment group and a control group, with 30 patients in each group. For the control group patients, combined general/epidural anesthesia was administered during the operation, while morphine was administered for patient-controlled epidural analgesia after the operation. The acupuncture treatment group received scalp acupuncture in addition to identical anesthesia treatments administered to the control group.

The statistical breakdown for each randomized group was as follows. The acupuncture treatment group was comprised of 16 males and 14 females. The average age in the treatment group was 57.65 (± 6.67) years. The average weight in the treatment group was 54.63 (± 6.58) kilograms. The control group was comprised of 13 males and 17 females. The average age in the control group was 58.07 (± 7.02) years. The average weight in the treatment group was 55.32 (± 6.50) kilograms. There were no significant statistical differences in gender, age, and weight relevant to patient outcome measures for patients admitted to the study.

Anesthesia Procedure

For both groups, patients received combined general/epidural anesthesia (CSEGA) during the operation. After the operation, patient-controlled epidural analgesia (PCEA) was also prescribed. Doses of morphine (3.5 mg) and 20 mL of 0.75% bupivacaine were diluted with 0.9% sodium chloride to make a 100 ml solution, which was injected into a patient-controlled analgesia (PCA) infusion pump. When the peritoneum was closed during the surgery, 1.5 mg of morphine and 2% lidocaine were diluted with 0.9% sodium chloride to make a 5 ml solution and was injected into the patients. Next, when the patients were fully awake after the surgery, a PCA pump was given to the patients daily (2 ml/h), for two continuous days.

Acupuncture Procedure

The treatment group patients received scalp acupuncture therapy 20 minutes before the operation. The scalp acupuncture lines used for the treatment group included the following:

- Lateral line 3 of forehead
- Lateral line 1 of vertex

Acupuncture treatment commenced with patients in a supine position. A disposable acupuncture needle was inserted obliquely into each scalp line. Once a deqi sensation was obtained, the needles were connected to an electroacupuncture device with a disperse-dense wave. The frequency was adjusted from a low level (2 Hz) to a high level (50 Hz). The intensity level was set to patient tolerance levels or until muscle contractions were observable. Once the electric stimulation began, the needles were retained until completion of the operation.

Results

The results indicate that scalp acupuncture combined with epidural morphine analgesia into an integrated treatment protocol is more effective than epidural morphine analgesia as a standalone therapy. The researchers conclude that scalp acupuncture is safe and effective for the relief of postoperative intestinal cancer pain.

Notes

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