Electroacupuncture for pain treatment after total knee arthroplasty

In a single-blind randomised preliminary study evaluating the analgesic effect of electroacupuncture for postoperative pain in patients undergoing total knee arthroplasty, Tzeng et al\(^1\) showed that electroacupuncture delayed the first demand for epidural patient-controlled analgesia (PCA), but did not decrease the total dosage of PCA solution or the incidence of postoperative vomiting. Given that total knee arthroplasty is a common surgical procedure and is frequently associated with severe postoperative pain, \(^2\) their findings have potential implications. In a randomised controlled trial, however, to differentiate the effect of one factor on study endpoints, all of the other factors have to be standardised. In this study, several important issues were not well addressed.

First, preoperative psychological comorbidities such as anxiety, depression, negative mood and pain catastrophising are highly prevalent in patients undergoing total knee arthroplasty, \(^3\) and are significantly associated with acute and chronic pain after the procedure. \(^4\) In the summary of patient demographics, the authors did not specify whether the preoperative psychological comorbidities of patients were comparable among the three study groups, which may otherwise have provided more information regarding the clinical applicability of acupuncture for postoperative pain control after total knee arthroplasty. Satisfaction can be quantified using a simple scoring system—for example, from 1 to 5 where 1 = very unsatisfactory; 2 = unsatisfactory; 3 = neutral; 4 = satisfactory; 5 = very satisfactory. \(^5\)

Finally, electroacupuncture delayed the first demand for PCA but did not decrease the total dosage of PCA solution. These findings suggest that electroacupuncture may merely provide a transient relief of postoperative pain. Given that electroacupuncture is an invasive intervention that demands appropriately trained practitioners and involves additional costs, if the benefits are transient then we would argue that further studies addressing the cost-effectiveness of this approach are necessary before it can be considered as a routine analgesic method in patients undergoing total knee arthroplasty.

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