Preoperative duloxetine on postoperative pain after laparoscopic gynecological surgeries : A systematic review and meta-analysis of randomized controlled trials

abstract

Objective: To evaluate the efficacy and safety of preoperative duloxetine on postoperative pain management after gynecologic laparoscopic surgeries.

Methods: A systematic search was done in Cochrane Library, PubMed, ISI web of science, and Scopus from inception to September 2021. We selected randomized clinical trials (RCTs) that compared preoperative duloxetine (intervention group) versus placebo (control group) among women undergoing gynecologic laparoscopic surgeries. Our primary outcomes were pain scores evaluated by the Visual Analog Scale (VAS) at 2, 6, 12, and 24 h postoperatively. Our secondary outcomes were the time required for the first analgesic request in minutes, postoperative analgesic consumption in milligrams, length of hospital stay in days, and side effects.

Results: Four RCTs with a total number of 244 patients were included in our systematic review and metaanalysis. We found duloxetine was linked to a significant reduction in VAS pain scores at different time intervals. The first analgesic request was significantly earlier in the placebo group than in the duloxetine group ($p = 0.03$). In addition, duloxetine significantly reduced the postoperative analgesic consumption compared to placebo (MD= -41.97, 95% CI [-53.23, -30.72],