

1. Article Title: Scopolamine slightly improved postoperative Anxiety and Depression scores in High-risk Patients with Preoperative Anxiety and Depression Undergoing Gynaecological Surgery: A Randomized, Double-blind and Placebo-Controlled Clinical Trial

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Abstract

Objective: We further explored the anxiolytic and antidepressant effects of scopolamine on perioperative anxiety and depression in a high-risk population. *Design:* randomised controlled study. *Setting:* tertiary hospital. *Population:* 583 gynaecological surgical patients were enrolled based on the inclusion and exclusion criteria. *Methods:* We assessed preoperative anxiety and depression in patients using the Hospital Anxiety and Depression Scale (HADS). Patients with anxiety and depression symptoms were randomly assigned to the scopolamine group (0.3 mg scopolamine intravenous injection, iv.) or the placebo group (saline iv.). *Main outcome measures:* the changes in HADS score on POD 1,3 and 7 and the PSQI scale score, side effects of medication and short-term postoperative complications. *Results:* A total of 128 of 583 patients had preoperative anxiety or depression symptoms. The mean anxiety score (HADS-A) decreased significantly in the scopolamine group on postoperative day 7 by 1.43 points [95% (CI), range 1.11 to 1.74], compared to a mean reduction score of 0.33 [95% (CI), range 0.12 to 0.53] in the placebo group. The mean depression score (HADS-D) also decreased significantly in the scopolamine group on postoperative day 7 by 0.43 points [95% (CI), range 0.17 to 0.68], compared to a mean reduction score of 0.08 [95% (CI), range -0.14 to 0.29] in the placebo group. *Conclusion:* Scopolamine significantly alleviated postoperative anxiety and depression in a high-risk population undergoing gynaecological surgery. *Funding:* the National Research Institute for Family Planning, PR China (2021KYSHX01501) and the Scientific Research Initial Funding of Guangdong Provincial People's Hospital awarded to HS (KJ012019529).

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