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None declared.

Acupuncture for adenomyosis: a systematic review and meta-analysis

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Review question / Objective: **Can patients with adenomyosis benefit from acupuncture treatments? Evaluation of current evidence with respect to the efficacy and safety of acupuncture for adenomyosis by conducting a systematic review and meta-analysis of the available randomized controlled trial.**
Condition being studied: **Adenomyosis is a gynecological disorder defined as the presence of the endometrial gland and stroma cells within the myometrium. This condition mainly occurs in women who are multiparous and over the age of 30. Among women undergoing hysterectomy, the frequency of adenomyosis is reported to range from 8.8% to 61.5%. Adenomyosis is also observed in 20. 9% to 34% of women who have been referred for pelvic imaging. The incidence of adenomyosis in the general population remains uncertain. Adenomyosis can significantly decrease the patient's quality of life, with the clinical presentations of menorrhagia, dysmenorrhea, metrorrhagia, chronic pelvic pain and dyspareunia.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 December 2021 and was last updated on 01 December 2021 (registration number INPLASY2021120001).

INTRODUCTION

Review question / Objective: **Can patients with adenomyosis benefit from acupuncture treatments? Evaluation of current evidence with respect to the efficacy and safety of acupuncture for adenomyosis by conducting a systematic review and meta-analysis of the available randomized controlled trial.**

Rationale: **Adenomyosis is a common gynecological disorder. As present hormonal or surgical methods are often associated with unwanted side effects, insufficiency, and recurrency, some women**

with adenomyosis receive acupuncture as adjunctive therapy for improvement of symptoms and health, despite sparse evidence.

Condition being studied: Adenomyosis is a gynecological disorder defined as the presence of the endometrial gland and stroma cells within the myometrium. This condition mainly occurs in women who are multiparous and over the age of 30. Among women undergoing hysterectomy, the frequency of adenomyosis is reported to range from 8.8% to 61.5%. Adenomyosis is also observed in 20. 9% to 34% of women who have been referred for pelvic imaging. The incidence of adenomyosis in the general population remains uncertain. Adenomyosis can significantly decrease the patient's quality of life, with the clinical presentations of menorrhagia, dysmenorrhea, metrorrhagia, chronic pelvic pain and dyspareunia.

METHODS

Search strategy: Eligible studies will be searched from electronic databases including the Cochrane Central Register of Controlled Trials, the Chinese Clinical Trial Registry, MEDLINE (PubMed), Embase (Ovid), AMED Allied and Complementary Medicine Database (Ovid) and China Academic Journals Full- biomedical literature service system (SinoMed). We will search with different combinations of the terms 'acupuncture', 'adenomyosis', 'adenomyoma' and 'randomized controlled trials'. Other resources will also be searched, including the references of the retrieved studies, reviews and meta-analyses for identification of further relevant articles.

Participant or population: Patients who had been diagnosed with adenomyosis and show featured clinical presentations, including dysmenorrhea, heavy menstrual bleeding, chronic pelvic pain, dyspareunia and infertility. Diagnosis of adenomyosis is basically through sonographic or magnetic resonance imaging (MRI) examinations, in comply with a clinical guideline.

Intervention: Any forms of acupuncture treatment include but not limited to manual acupuncture, electroacupuncture, auricular acupuncture, catgut-embedding acupuncture, acupoint herbal plaster and acupoint-based TENS.

Comparator: No treatment, placebo or sham acupuncture, western medicine or traditional Chinese herbal medicines.

Study designs to be included: randomized controlled study.

Eligibility criteria: RCTs involved adenomyosis patients receiving acupucnture treatments comparing with no treatment, placebo or sham acupuncture, western medicine or traditional Chinese herbal medicines.

Information sources: Electronic databases.

Main outcome(s): Menstrual symptoms, pain relief, quality of life, and anxiety and depression, measured by using Menstrual Symptom Scale (MSS), Visual Analogue Scale (VAS) or Numeric Rating Scale (NRS), SF-36 Health Survey and The World Health Organization Quality of Life (WHOQOL), the Hospital Anxiety and Depression Scale (HADS), Depression Anxiety Stress Scales (DASS), and Hamilton Depression Rating Scale (HDRS), or other valid tools respectively.

Additional outcome(s): Menstrual bleeding volume, serum cancer antigen 125 (CA-125), uterine size, success rate, and adverse events.

Data management: Data extraction will be conducted by two independent researchers.

Quality assessment / Risk of bias analysis: The quality of the trials of included studies will be assessed by two other researchers in accordance with the Cochrane Handbook for Systematic Reviews of Interventions (Version 6.2)

Strategy of data synthesis: We will use the Revman 5.4 software program provided by

the Cochrane Library for data synthesis. For continuous data, mean difference (MD) with 95% confidence interval (CI) will be used for comparison of the effects observed. For binary outcomes, the risk ratio (RR) with 95% IC will be used. If p>0.10 and I2 < 50%, the fixed-effect model will be used in pooled data analysis; if p<0.10 and 50% < I2 < 75%, the random-effect model will be used. Where there is constantly considerable heterogeneity (P 75%), meta-analysis will be given up and a descriptive analysis will be conducted.

Subgroup analysis: When more than 10 studies are included in one outcome, subgroup analysis will be conducted based on the different acupuncture techniques in the nature of invasiveness or noninvasiveness.

Sensitivity analysis: If the chi-squared test (χ2) introduces p 50% which indicates heterogeneity, we will perform sensitivity analysis to detect the source of bias.

Language: No restriction.

Country(ies) involved: China, Hong Kong(China), UK.

Keywords: adenomyosis; pain; acupuncture; clinical efficacy; complementary medicine; systematic review.

Contributions of each author:

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