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Oral Presentation Session 18: Research Methodology

OS18.01

Effectiveness of Acupuncture for Primary Ovarian Insufficiency: A Systematic Review and Meta-analysis



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Purpose: This systematic review aimed to assess current evidence from available randomized controlled trials (RCTs) on the effects of acupuncture for patients with primary ovarian insufficiency (POI).

Methods: We searched twelve databases to identify relevant studies published before July 2014. The primary outcomes were serum follicle-stimulating hormone (FSH) levels and resumption of menstruation. Secondary outcomes were serum estradiol (E2), luteinizing hormone (LH) levels and relief of menopausal symptoms. Two reviewers independently assessed the risk of bias using the Cochrane's tool, extracted the results, and evaluated the overall level of the evidence using Grading of Recommendations Assessment, Development and Evaluation (GRADE) criteria.

Results: Total 1426 records screened, finally 8 RCTs were selected. The pooled results showed that acupuncture decreased significantly serum FSH levels (mean differences (MD) -9.26, 95% CI: -13.11 – -5.41, I²=0%, p<0.00001), and made more women resume menstruation (risk ratios (RR) 1.25, 95% CI: 1.12 – 1.39, I²=47%, p< 0.0001). The change of E2 was significant but with considerable heterogeneity (MD 28.33, 95% CI: 4.24 – 52.41, I²=97%, p=0.02). The acupuncture treatment showed a tendency for decrease in the levels of LH, but did not reach a statistical significance (MD -5.34, 95% CI: -13.02 – 2.34, I²=48%, p=0.17). However, the results should be interpreted with caution because there was small number of participants, risk of bias of blinding, and clinical diversity in included studies. The level of evidence of FSH, LH and resumption of menstruation was assessed as “low” using GRADE. The level of evidence of E2 was “very low” due to serious risk of bias and inconsistency.

Conclusion: This systematic and meta-analysis supports that acupuncture may reduce serum FSH levels and restore the menstruation in patients with POI. Further rigorously designed studies are needed to confirm the effectiveness and safety of acupuncture in patients with POI.

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The use of systematic reviews in the design of randomized controlled trials of acupuncture: a systematic review



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Purpose: One of the major purposes of systematic review is to guide future randomized studies to resolve current conflicts or address uncertainty in clinical practice. Concerns have been raised regarding waste in research due to inadequate use of existing evidence for designing future research. We aimed to investigate how systematic reviews have been used in the design of randomized trials of acupuncture.

Methods: Protocols for randomized trials of acupuncture with trial registration number published from January 2008 to April 2013 were searched through four English databases (EMBASE, MEDLINE, CENTRAL and AMED). Full-list of reference titles in included study protocols was screened to identify cited systematic reviews.

Results: Thirty-eight protocols that referenced a total of 108 systematic reviews were eligible. Thirty-seven protocols (97%) cited at least one review (median value of 3). Reviews were predominantly used for identifying current evidence levels of diseases/conditions or available treatments in 36 of 37 review-cited protocols (95%). Other areas of use included justification of study interventions and comparisons (n=13; 34%), estimation of the difference to detect or margin of equivalence (n=2; 5%), formulation of acupuncture details (n=2; 5%), estimation of the control group event rate (n=2; 5%), selection or definition of outcome (n=6; 16%), collection and analyses of adverse events (n=3; 8%), duration of follow-up (n=0; 0%) and other areas that were not directly related to the design of the respective protocol (n=7; 18%). Eighteen of 37 protocols (49%) cited systematic reviews to inform at least one aspect of the design of the trial.

Conclusion: Most protocols used systematic reviews for the purpose of background description and only about a half of them cited systematic reviews to inform the design. Adequate use of systematic reviews is needed to design future acupuncture trials in context of the existing evidence and to avoid unnecessary redundancy of research.

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