



The
Fertility Society
of Australia

Pre-Conception Health Special Interest Group



The role of complementary therapies and medicines to improve fertility and emotional well-being

Complementary and alternative medicines (CAM) and therapies are defined as ‘practices and ideas which are outside the domain of conventional medicine in several countries’, and their usefulness as ‘preventing or treating illness, or promoting health and wellbeing’ [1]. Common therapies include acupuncture, herbal medicine, and manual therapies. Few high quality studies of the effect of complementary therapies on fertility have been undertaken. Of the published studies, most have focused on female fertility. Existing evidence of the effect of complementary therapies and medicines on subfertility and infertility-related distress is discussed below.



Your Fertility is a national public education campaign funded by the Australian Government Department of Health and Ageing under the Family Planning Grants Program.



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Evidence review

Fertility

Acupuncture and female fertility

There is limited high quality evidence about whether acupuncture can improve fertility. A randomised controlled trial of 84 women with polycystic ovarian syndrome (PCOS) receiving acupuncture or sham control acupuncture over 12 sessions found no difference in ovulation and pregnancy rates between groups, and both groups had similar improvements in their LH to FSH ratio [2]. A low quality non-randomised trial involving 90 infertile women with hormonal disturbances compared the efficacy of giving ear acupuncture once a week for three months with giving hormonal treatment (n=45 per group). There were equivalent pregnancy rates in the two groups but fewer side effects and miscarriages in the acupuncture group [3]. In an uncontrolled trial of electro-acupuncture in 24 anovulatory women with PCOS, nine women experienced more frequent ovulations [4]. The mean monthly rate of ovulation increased from 0.15 to 0.66 (p=0.004), and after three months the LH to FSH ratio and testosterone concentrations were significantly decreased.

Herbal medicine and female fertility

Chinese herbal medicines (CHM) may improve fertility, although the evidence is based on a mixture of high and low quality studies. A systematic review of CHM for women with primary or secondary infertility (endometriosis, PCOS, amenorrhea, advanced maternal age, unexplained infertility) included eight randomised controlled trials, 13 cohort studies, three case series and six case studies involving 1851 women [5]. Despite significant heterogeneity with the inclusion of different clinical populations, a meta-analysis of data suggested improved likelihood of achieving a pregnancy with CHM alone, or in combination with acupuncture or Western medical therapy (surgery or drugs) compared with Western medical therapy alone, over a four month period (OR 3.5, 95% CI 2.3-5.2). The meta-analysis of cohort studies (616 women) suggested a mean clinical pregnancy rate of 50% using CHM alone, or in combination with acupuncture or Western medical therapy compared with 30% for Western medical therapy alone (p<0.0001) [6].

A systematic review of CHM treatments to improve outcomes for women with endometriosis included two randomised controlled trials (n=158) [6]. In one trial no difference in pregnancy rates between CHM alone and gestrinone (antiprogesterone) subsequent to laparoscopic surgery was found (RR 1.18, 95% CI 0.87-1.59). In the second trial, CHM administered orally and in combination with a herbal enema was compared with danazol (a modified progestogen). Women taking CHM and those taking CHM in combination with a herbal enema were more likely to experience symptom relief than women taking danazol (RR 5.06, 95% CI 1.28-20.05 and RR 5.63, 95% CI 1.47-21.54, respectively).

A systematic review of trials comparing CHM and clomiphene for anovulation included 14 randomised controlled trials (n=1316) [7]. There was no difference in ovulation rates between groups in the six trials (n=604) reporting on this outcome. However, CHM plus clomiphene compared to clomiphene alone increased pregnancy rates (RR 1.50; 95% CI, 1.23-1.84).

A systematic review of CHM for women with PCOS included four trials (n=344) [8]. In two of these trials increased pregnancy rates were found for CHM plus clomiphene, compared with clomiphene alone (OR 2.97, 95%CI 1.71-5.17). In the other two trials there were no statistical differences in ovulation rates between CHM and clomiphene, or between CHM plus laparoscopic ovarian drilling (LOD) and LOD alone.

There is little high quality evidence for the efficacy of Western herbal medicine (herbs prescribed according to herbal practices in a Western setting) in improving fertility. One randomised controlled trial compared Mastodynon, a preparation containing chasteberry and other herbs, with a placebo control in 96 women with secondary amenorrhea, luteal insufficiency, or idiopathic infertility [9]. Pregnancy outcomes were collected at the end of three months and at a two-year follow up. Fifteen of the 66 women who had remained in the study conceived. There were no significant differences between groups. A second randomised controlled trial evaluated Fertility Blend, a proprietary combination of: chasteberry, green tea extracts, L-arginine, vitamins E, B6, and B12, folate, iron, magnesium, zinc and selenium compared with a placebo [10]. Ninety three women who had been trying to conceive for six to 36 months completed the study. After three months the pregnancy rate was higher in the treatment group compared with the control group (26% versus 10%, p=0.01).

Homeopathy and female fertility

There is no evidence that homeopathy improves fertility outcomes. One randomised controlled trial recruited 67 women with infertility associated with amenorrhea or oligomenorrhea and evaluated a homeopathic preparation of chaste tree berry versus placebo taken over three months. There were no group differences in spontaneous menstruation, pregnancy or live birth rates [11].

Manual therapies and female fertility

There is little evidence of benefit on fertility from manual therapies. A low quality study of 17 women with suspected or confirmed pelvic adhesions received 20 hours of site-specific manual physical therapy treatments over three months [12]. Ten subjects became pregnant and nine of these had a live healthy baby.

One randomised controlled trial of reflexology versus sham reflexology was administered to 48 anovulatory women attending a fertility clinic [13]. Women received eight sessions over 10 weeks of either foot reflexology or sham reflexology with gentle massage. There were no differences between the reflexology and control groups in rates of ovulation (42% vs 46%) or pregnancy (15% vs 9%).

Acupuncture and male fertility

Acupuncture may improve sperm quality, although effects on pregnancy and live birth rates have not been studied. A prospective, randomised study of 19 men with semen abnormalities received acupuncture and moxa or sham acupuncture twice a week for 10 weeks [14]. (Moxa is a cone or stick of dried herb, usually mugwort—burnt on or near the skin as a modality in conjunction with acupuncture). Subjects in the treatment group (n=8) had a significant increase in the percentage of normal-form sperm compared to those in the control group (n=10). A second placebo-controlled trial of 57 men with sperm concentrations <1 million sperm/ml were randomised to twice weekly acupuncture or sham acupuncture for six weeks [15]. A significantly higher percentage of motile sperm (World Health Organization categories A-C), but no effect on sperm concentration, was found after acupuncture compared with placebo acupuncture. A small (n=40) prospective controlled study of men with idiopathic oligospermia, asthenospermia, or teratozoospermia received acupuncture twice a week over five weeks [16]. Significantly more sperm without ultrastructural defects were found in the acupuncture group compared with no treatment.



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Emotional wellbeing

The effect of acupuncture

Acupuncture may improve emotional wellbeing. One randomised controlled trial of 32 women with infertility-related stress received acupuncture or usual care [17]. Significant reductions in social concern and relationship concern were found for those receiving acupuncture ($p=0.05$). Interview data described acupuncture as providing a sense of relaxation, calmness, a changed perspective in relation to coping and 'time out'. These findings confirm earlier findings from studies of women receiving acupuncture [18].

The effect of mind-body therapies

There is limited evidence of benefit on emotional wellbeing from art therapy, and other creative therapies. Small low quality studies report benefits including stress reduction, validation of feelings, and fostering self-awareness. There is no high quality evidence examining the effects of religion and spirituality to assist individuals coping with the emotional distress from infertility.

Summary

There is some evidence of benefit from acupuncture and herbal medicine in improving fertility outcomes for women with specific clinical infertility diagnoses and of acupuncture in improving sperm quality in infertile men. Acupuncture, spirituality and art therapy may reduce infertility-related distress.

An observational study of women using CAM during 12 months of ART treatment found a lower live birth rate among those using CAM compared with non-users [19]. These observations were not associated with a specific CAM modality.

Recommendations

There is insufficient evidence to advise individuals of a clear benefit to fertility outcomes from many CAMs. Data from systematic reviews and clinical trials provide no evidence of adverse outcomes and individuals should be encouraged to discuss their decision to use CAM in the peri-conceptual period with their fertility specialist.

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