

Lavender aromatherapy to reduce anxiety during intrauterine inseminations: a randomized, controlled trial

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Context – Infertility patients have a high level of anxiety before and during infertility treatments due to anticipated discomfort of a procedure and anticipation of a long awaited pregnancy. Aromatherapy with lavender, an essential oil, has been shown to be effective in reducing anxiety and pain in procedures such as Botox injections, cesarean delivery and intrauterine device placement.

Objective – To determine if lavender aromatherapy (LA) reduces anxiety during an intrauterine insemination (IUI) procedure.

Methods – Subjects were randomized 1:1 to receive LA or placebo using variable block approach. Subjects were given LA or placebo on a cotton ball placed in a porous drawstring pouch to inhale during their IUI procedure. Anxiety was assessed pre, during and post procedure using a standard visual analog scale (VAS) of 0 to 100 mm. A sample size calculation was performed for the primary endpoint, anxiety level. Using a two-sided two sample T-test and assuming unequal variance 62 patients (31 per arm) are needed to obtain a power of 80% at alpha 0.05. Statistical analysis was performed using a two sample T-test, Chi-Square test, and the Fisher's exact test as appropriate.

Patient(s) – Interim analysis of 20 women undergoing intrauterine insemination.

Intervention(s) – LA (*Lavandula angustifolia*, Aura Cacia) vs placebo (water).

Main Outcome Measure(s) – Anxiety level and pregnancy rate.

Result(s) – Twenty women were randomized, 11 to placebo and 9 to the lavender group. There were no differences in baseline demographics of age, ethnicity, BMI, history of anxiety or depression, ovarian reserve testing, TSH, infertility diagnosis or semen analysis. Baseline VAS prior to IUI were the same 42 ± 22 mm vs 39 ± 23 mm in the LA and placebo groups respectively. There was a significant decrease in anxiety after lavender inhalation during the IUI 23 ± 14 compared to placebo 37 ± 16 ($p=0.05$). All nine subjects in the LA group were satisfied with the aromatherapy during their procedure. 82 % of the subjects receiving placebo reported that they would prefer to use LA during their IUI procedure. There was no difference in pregnancy rates between the two groups 42% vs 30% in LA vs placebo group respectively ($p=0.64$).

Conclusions: Lavender aromatherapy reduces anxiety and is preferred by women during an intrauterine insemination.