Title: Comparison of single vs. double intrauterine insemination in unexplained infertility – a randomized control trial
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Objective: Intrauterine insemination (IUI) with COH is a cost-effective treatment for couples with unexplained infertility. Double IUI may improve the reproductive outcomes in male factor infertility; however, its effectiveness in couples with unexplained infertility remains controversial. The objective of the study was to compare efficacy of two inseminations versus single in couples with unexplained infertility undergoing COH and IUI.

Design: Prospective, randomized clinical trial.

Materials and Methods: Seventy two couples diagnosed with unexplained infertility after a complete workup were recruited for the study. Couples with prior COH and IUI were excluded. Women were randomly assigned through computer generated randomized tables to undergo either single or double insemination after COH. Each woman underwent up to a maximum of 6 cycles. There was no crossover in the treatment cycle after the randomization. COH was achieved with clomiphene citrate (50-150 mg) for 5 days and HCG injection was given to the women when the lead follicle was >18 mm. Semen preparation was done by density gradient method. Single IUI was performed at 34 hrs after the HCG injection and double IUI was performed at 12 and 34 hrs after HCG. Main outcome measure was clinical pregnancy rate, miscarriage and live birth rates in each group. Data was analyzed using Chi square and Fischer exact test for significance.

Results: There were 208 IUI cycles among 72 couples. 34 women went through 96 single IUI cycles and 38 women underwent 112 double IUI cycles. Twenty seven women became pregnant with an overall pregnancy rate of 12.9% per cycle and 32.9% per couple. Pregnancy rates were 14.5% with single insemination and 11.6% with double insemination. There were 2 miscarriages in each group. The live birth rates were 12.3% and 9.7% respectively in these groups. The differences in pregnancy and live birth rates amongst the two groups were not statistically significant.

Conclusions: Double insemination offers no advantage over single insemination in women with unexplained infertility undergoing COH with IUI.

Support: None