Title: Evaluation of pre- and post-wash sperm parameters on intrauterine insemination outcome

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Objective: Intrauterine insemination is a cost effective treatment commonly used to treat infertile couples. The goal of our study was to evaluate the sperm quality in pre- and post-wash samples and correlate them with the IUI outcomes.

Design: Prospective study.

Materials and Methods: Semen samples were collected from 102 infertile men undergoing IUI and examined according to WHO 1999 guidelines for sperm count, motility and morphology. Patients underwent controlled ovarian hyperstimulation and IUI. Semen samples were prepared by gradient sperm wash technique. Pre and post wash sperm count, and leukocyte count were assessed. Pregnancy was assessed by quantitative β-HCG test after 1 week of the missed period and confirmed by vaginal ultrasound 3 week after positive pregnancy test. Statistical analysis was done to compare different variables in the group achieving pregnancy versus the patients who did not achieve pregnancy. Wilcoxon's test or Fisher exact test were utilized and a P <0.05 was considered significant.

Results: Women who achieved pregnancy showed significantly higher levels of post wash sperm concentration compared with the non-pregnant group (P= 0.017). There was no significant difference between pregnant versus non-pregnant groups regarding the male age, female age, duration of infertility, or infertility type (Table).

Conclusions: IUI outcome is not affected by infertility type or age of the infertile couple. Post-wash sperm concentration correlates positively with pregnancy outcome after IUI.

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