Objective(s): To compare the clinical pregnancy rate in intrauterine insemination (IUI) simultaneously or 34-36 hours following hCG injection in gonadotropin stimulated IUI cycles.

Study Design: Randomized, prospective, controlled, study conducted in a university infertility clinic. Of the 923 infertile couples, 220 couples with unexplained infertility or mild male factor infertility included to the study. Before ovarian stimulation patients were randomized into two groups: IUI at 34-36 hours after hCG injection (Group I) (n=106) and IUI simultaneously with hCG administration (Group II) (n=98). The primary outcome was clinical pregnancy rates.

Results: There was no significant difference between groups according to baseline patient and cycle characteristics. Clinical pregnancy rates were 9.4% and 12.2% in Group I and Group II respectively (p=0.523). Although Group II have better outcomes there was no statistically significant differences between different timing methods for IUI expressed as clinical pregnancy rate: IUI simultaneously with hCG versus IUI at 34-36 hours after hCG (odds ratio (OR) =1.35, 95% CI 0.53 to 3.42).

Conclusion(s): Although it was not statistically significant, higher clinical pregnancy rates can be attained in stimulated IUI cycles in which IUI is performed simultaneously with hCG injection compared to cycles in which IUI is performed at 34-36 h following hCG injection. Prospective randomized trials with larger sample sizes or meta-analyses will further elucidate this topic.