**Title:** TIME INTERVAL BETWEEN HYSTEROSCOPIC POLYPECTOMY AND INTRAUTERINE INSEMINATION IS NOT ASSOCIATED WITH PREGNANCY OUTCOMES

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**Background**: The benefit of polypectomy prior to embryo transfer has been well described in the literature (1,2). Polypectomy prior to intrauterine insemination (IUI) has also been shown to be an effective measure in improving pregnancy rates, although the data is not as robust as its in vitro fertilization (IVF) counterpart (3). Previous IVF literature has examined the optimal time interval between hysteroscopic polypectomy and embryo transfer and association with pregnancy outcomes. Results suggest no benefit to waiting any specific interval of time following hysteroscopy prior to proceeding with embryo transfer (4,5). However, literature does not currently exist to determine if an optimal time interval exists for those undergoing IUIs. An evidence-based approach to the timing of fertility procedures following surgical management is important in all areas of assisted reproduction.

**Objective**: To determine if the time interval between hysteroscopic polypectomy and IUI is associated with pregnancy outcomes.

**Materials and Methods**: In this retrospective study, medical records of women ages 18-45 years who underwent IUI following hysteroscopic polypectomy at a single institution between January 2018 and August 2023 were reviewed. This study was approved by the Institutional Review Board prior to study initiation. All patients with a history of tubal factor infertility and those who had previously undergone IVF were excluded from the study. The primary outcome was clinical pregnancy following IUI with secondary outcomes not pregnant, biochemical pregnancy, spontaneous abortion, and ectopic pregnancy. Patients were categorized into 0 - 30 days, 31 - 60 days, 61-90 days, and 91+ days based on the time interval between hysteroscopic polypectomy and subsequent IUI. To identify significant differences between groups, chi square analysis and linear regression were utilized as appropriate to compare between groups with p values $<0.05$ significance.

**Results**: A total of 810 intrauterine insemination cycles following hysteroscopic polypectomy were identified and included in the study. Average patient age at the time of polypectomy was 38.8 years and BMI 27.8. The overall clinical pregnancy rate was 15.4%. The biochemical pregnancy, ectopic pregnancy and spontaneous abortion rates were 2.8%, 0.6%, and 12%, respectively. Controlling for age and BMI, there was no difference in clinical pregnancy when comparing the length of time from hysteroscopic polypectomy to IUI procedure.

**Conclusions**: The current study suggests that short interval to IUI cycles following hysteroscopic polypectomy does not negatively impact pregnancy outcomes. Augmenting existing IVF data, study results show it is reasonable to offer patients fertility treatments with IUI at any time following surgical management.

**References:**

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