Hysteroscopic diagnosis and treatment of endometrial polyps in patients with infertility

Yulduz Muhammadshukur qizi Tilavova
tilavovayulduz@gmail.com
Samarkand State Medical University

Abstract: Observational studies have indicated a negative impact of endometrial polyps on fertility. The precise progression of endometrial polyps remains uncertain. In numerous instances, it is considered reasonable to adopt a wait-and-see approach for small and asymptomatic polyps. However, in cases of infertility, it is recommended to surgically remove endometrial polyps before commencing treatment to augment the likelihood of natural conception or assisted reproductive pregnancy rates. Hysteroscopy polypectomy continues to uphold its status as the preeminent surgical intervention for treatment purposes.

Keywords: Endometrial polyps, Infertility, Hysteroscopy

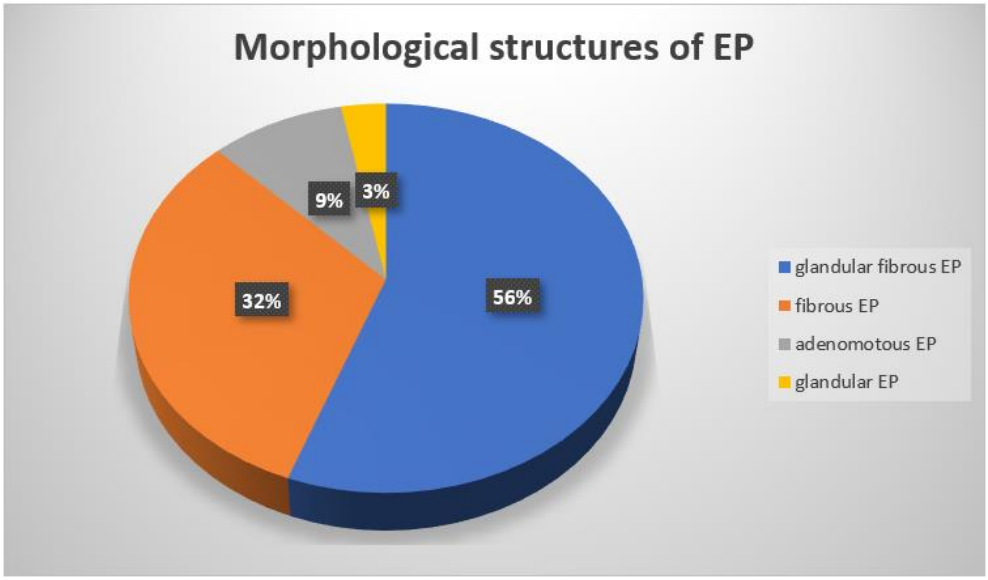
Introduction. Endometrial polyps are localized growths of the uterine mucosa that comprise endometrial glands, stroma, and blood vessels. It is estimated that uterine polyps are present in approximately 10% of the general female population [1]. While they may not exhibit any symptoms, polyps are frequently detected during investigations conducted for abnormal uterine bleeding and infertility concerns. Abnormal uterine bleeding stands as the predominant symptom associated with endometrial polyps, with a prevalence of approximately 20% to 30% in women experiencing such bleeding [2-4]. The role of polyps in the development of subfertility and pregnancy loss remains uncertain, and our understanding of the potential mechanisms involved is limited. These mechanisms could include disruptions in sperm transport, interference with embryo implantation, intrauterine inflammation, or alterations in the production of factors that facilitate endometrial receptivity[5-6]. Various diagnostic techniques, such as two- or three-dimensional transvaginal ultrasound, saline infusion sonography, or hysteroscopy, are commonly employed to assess endometrial polyps, yielding satisfactory detection rates. The approach taken by clinicians when encountering polyps during infertility investigations is not definitively known, and there may be considerable variation among different medical practitioners. In patients with subfertility, the detection of endometrial polyps often occurs as an accidental discovery[7-10]. The correlation between endometrial polyps and subfertility is a subject of debate, given that numerous women with polyps have experienced successful pregnancies[11]. Nevertheless, there is a growing body of

literature that indicates the potential significance of polyps in relation to fertility and the outcome of fertility treatments. In this article, according to our practical investigations we give results of hysteroscopic management of endometrial polyps in patients with infertility.

Materials and methods. A prospective study was undertaken to examine 35 women of reproductive age, ranging from 21 to 45 years, who presented with primary and secondary infertility. During hysteroscopy, it was determined that all 35 women had an endometrial polyp, which was subsequently confirmed through histological analysis. The study was conducted within the Endogynecology Department of the Samarkand Regional Perinatal Center, spanning from 2020 to 2023.

The diagnostic procedure encompassed a comprehensive clinical examination, hysteroscopic inspection of the uterine cavity, and histological analysis of biopsy specimens obtained during hysteroscopy to substantiate the diagnosis of endometrial polyp.

The histological examination was conducted at the laboratory within the Department of Pathological Anatomy at Samarkand State Medical University. The outcomes of the histological examination unveiled the subsequent findings:



Picture 1. Morphological structures of EP

The following were morphologically verified:

glandular fibrous endometrial polyps 19(54%)

endometrial fibrous polyps 11(31%)

adenomotous polyp 3(9%)

glandular polyp 1(3%)

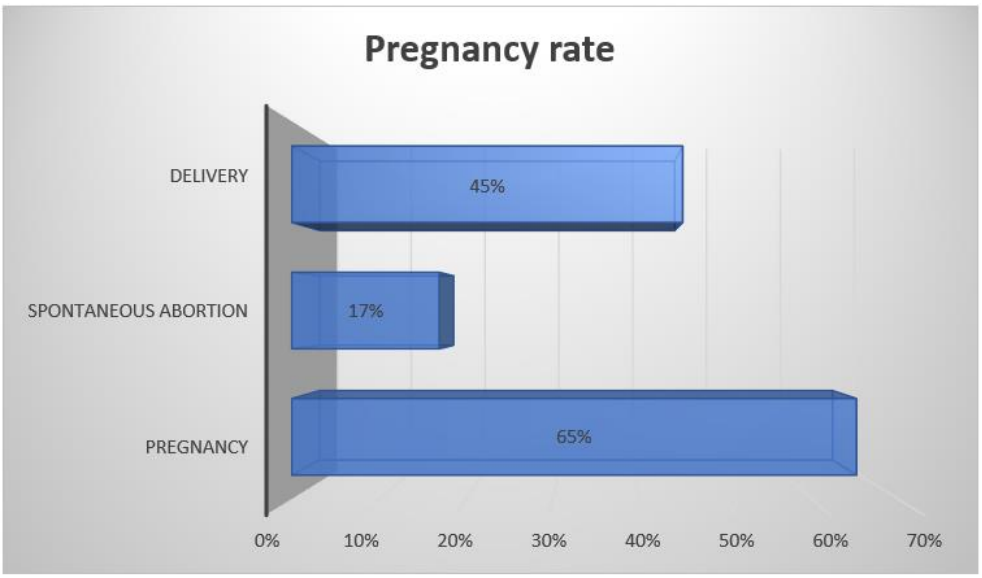
fibrous-adenomatous 1(3%).According to existing literature, Hysteroscopic polypectomy continues to be recognized as the preferred approach for both the diagnosis and treatment of endometrial polyps in our study. Hence, the primary course of treatment involved hysteroscopic resection of endometrial polyps using a

hysteroresectoscope during examination of the uterine cavity. The surgical procedure was conducted in a hospital setting, with operation duration ranging from 6 to 8 minutes. The average volume of blood loss was measured at 20.4 ± 0.9 ml. Notably, no intra- or postoperative complications were observed.

All patients were administered courses of etiotropic, anti-inflammatory, and antibacterial therapy during the postoperative period.

Results. The removal of endometrial polyps has been shown to have positive outcomes for natural conceptions, intrauterine insemination (IUI), and assisted reproduction technologies (ART), as stated in various publications. Several studies have found a correlation between polypectomy and improved rates of spontaneous pregnancy. For instance, Varasteh et al. observed a pregnancy rate of 78.3% after polypectomy in infertile women, compared to 42.1% in those with a normal uterine cavity. Similarly, Spiewankiewicz et al. reported a pregnancy rate of 76% with 19 out of 25 infertile patients conceiving within 12 months after polypectomy. Shokeir et al. also noted a 50% pregnancy rate in such patients after polypectomy. These findings suggest that women with unexplained infertility may benefit from undergoing polypectomy.

The findings of our investigation demonstrated that pregnancy transpired in 23 women, accounting for 65% of the total, within a time frame of 3-8 months following the surgical procedure. Among the patient cohort, 6 individuals, constituting 17% of the sample, experienced spontaneous miscarriages at an early stage, while one woman faced a late-stage spontaneous miscarriage occurring between 22-25 weeks of gestation. In addition, 16 patients, representing 45% of the group, successfully delivered their babies within the gestational window of 38-40 weeks.



Picture 2. Outcomes of pregnancy following the treatment of the study participants.

The findings of our investigation have demonstrated the efficacy of hysteroscopy as a diagnostic and therapeutic procedure for endometrial polyps in individuals

experiencing infertility. Moreover, the post-polypectomy pregnancy rates surpassing 50% align closely with existing literature evidence.

Conclusion. Endometrial polyps are frequently observed in women experiencing infertility (6). The collective evidence indicates that polyps have an adverse impact on fertility (6). In the majority of cases, it is justifiable to adopt a conservative approach in managing small and asymptomatic polyps (9). Nevertheless, for infertile patients, surgical removal of endometrial polyps is recommended in order to potentially enhance rates of spontaneous conception and pregnancy with assisted reproductive methods (9). Hysteroscopic polypectomy continues to be regarded as the superior method for surgical intervention in these cases.

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