

Unilateral Ovarian Agenesis Incidentally Diagnosed by Laparoscopy

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1. Abstract

1.1. Introduction: Unilateral ovarian agenesis has unknown etiology. Torsion of ovarian vessels during fetal life or early childhood can result in necrosis and resorption.

1.2. Case report: A 42 years old woman with infertility had referred to our clinic. Ultrasonography, hysterosalpingography, and laparoscopy found: normal left ovary left hydrosalpinx, and, in the right adnexal region, a tumor attached to the uterus. The right Fallopian was hypoplastic. The surgeons couldn't visualize the right ovary, so they did the biopsy of the tumor. Histopathology found no ovarian tissue in the biopsy material - it was a leiomyoma.

1.3. Discussion: In this case, if the surgeons had extirpated the whole tumor, there would have been a risk of removing the infertile patient's right ovary. Most unilateral ovarian agenesis cases are asymptomatic and diagnosed only if the infertility problem occurs. Diagnostic laparoscopy is the golden standard in the treatment of all benign adnexal conditions.

2. Introduction

Unilateral ovarian agenesis is a rare diagnosis of mostly unknown etiology. Early angiogenesis is essential for the physiological development and function of both ovaries [1]. Torsion of the ovarian pedicle early during childhood or even fetal life leads to avascular necrosis, separation of the tissue, and resorption [2]. The second cause could be congenital, a localized defect in the region of the genital ridge and caudal part of the Mullerian duct [3].

3. Case Report

This study reports the case of a 42-year-old female patient who had been referred to Obstetrics and Gynecology Clinic "Narodni front" in Belgrade with a diagnosis of secondary infertility. At 34, she

had had a spontaneous abortion in the 8th gestation week and had been infertile for eight years afterward. Conception did not occur after regular unprotected intercourse and five intrauterine inseminations. The partner's semen was normal. General examination of the patient showed a female phenotype with eutrophic body and breast characteristics. The external genitalia, vagina, cervix, and uterus appeared normal on gynecological examination. Abdominal ultrasound confirmed the physiological position and appearance of both kidneys. Vaginal ultrasound showed a physiological uterus and endometrium, as well as the left ovary with follicles. In the right adnexal region, there was a solid formation that had the look and dimensions of the right ovary, with a vascular pedicle attached to the uterus. On hysterosalpingography there was a normal uterine cavity, but the fallopian tubes did not fill bilaterally. Diagnose of left hydrosalpinx indicated the need for laparoscopy. The intervention verified the presence of a normal left ovary and left hydrosalpinx, with a good passage of methyl blue after chromopertubation (Figure 1). A solid encapsulated tumor of about four centimeters in diameter was attached with a pedicle to the posterior uterine wall and slightly adhering to the right fallopian tube, exactly where the right ovary should appear (Figure 2). The right fallopian was hypoplastic, with no fimbria.

After chromopertubation, there was an occlusion in its interstitial part. The surgeons concluded that the tumor was probably a fibroma of the right ovary and decided to do the biopsy. A second laparoscopy would be an option after getting the biopsy results (Figure 3). They also extirpated a small sub-serous myoma from the anterior uterine wall and liberated the left fallopian tube from adhesion. The postoperative course was uneventful. Histopathology analysis did not find any ovarian tissue in the biopsy material - it was a leiomyoma. The patient refused a second laparoscopy for its removal.

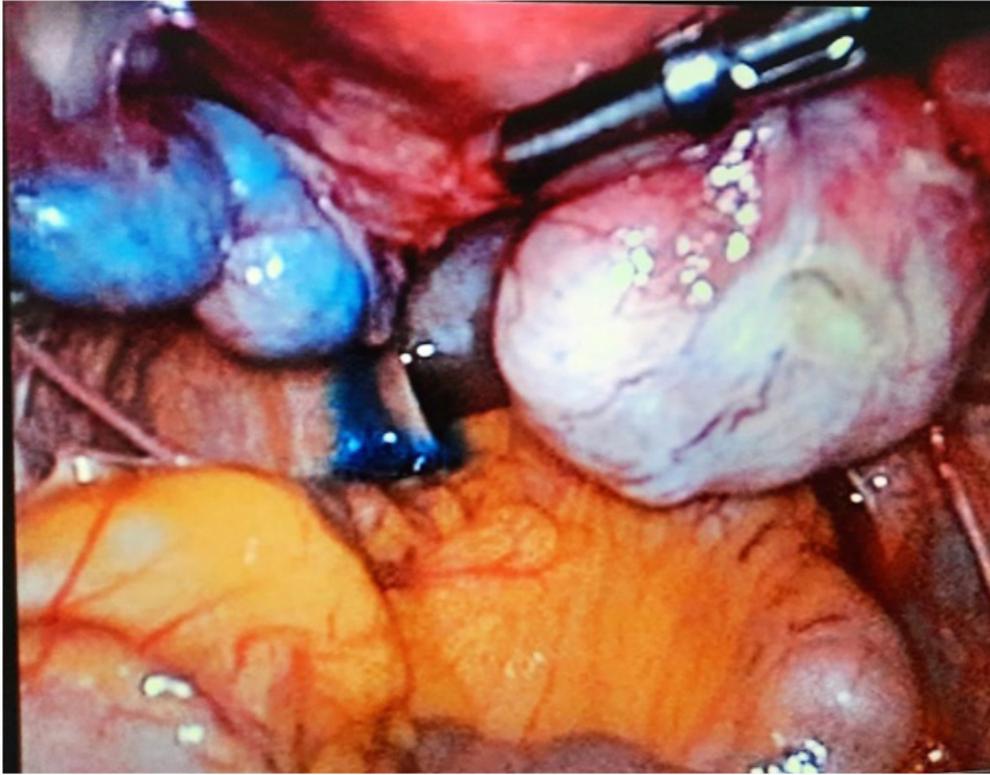


Figure 1: The intervention verified the presence of a normal left ovary and left hydrosalpinx, with a good passage of methyl blue after chromopertubation



Figure 2: A solid encapsulated tumor of about four centimeters in diameter was attached with a pedicle to the posterior uterine wall and slightly adhering to the right fallopian tube, exactly where the right ovary should appear

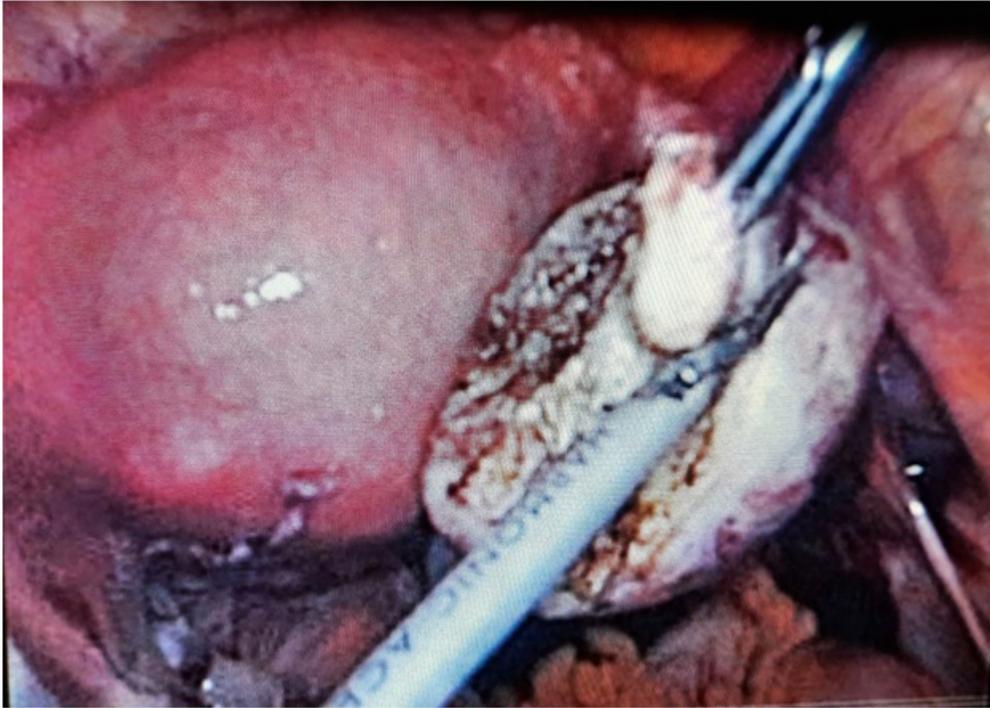


Figure 3: A solid encapsulated tumor of about four centimeters in diameter was attached with a pedicle to the posterior uterine wall and slightly adhering to the right fallopian tube, exactly where the right ovary should appear

4. Discussion

A woman with one-side sound adnexa can get pregnant and have children. That's why unilateral ovarian agenesis usually remains undiagnosed. In the case of adnexal pathology, an infertility problem needs thorough gynecological evaluation. Twenty years ago, Serbian authors studied the advantages and disadvantages of hysterosalpingography and laparoscopy. They concluded that only used together do they achieve accurate results in treating infertility [4]. As for the treatment, the consensus of gynecologic opinion for many years has been that surgery of the ovaries during reproductive age should be as conservative as possible [5]. In this case, there was an option to extirpate the whole tumor, but there was a risk of removing the infertile patient's right ovary. That's why the surgeons did the biopsy and waited for the histopathology results. The literature reviews report most unilateral ovarian agenesis cases as asymptomatic. In rare cases, ultrasound with a Color Doppler image of a pelvic mass should consider asymptomatic ovarian or adnexal torsion [6]. According to recent reports, the incidence of these cases is higher [7]. Today, laparoscopy is the golden standard in diagnosing and treating all benign adnexal conditions.

5. Conflict of Interest

None

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