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Case Report

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Complete absence of fallopian tube and adjacent ovary in a fertile patient

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ABSTRACT

Complete or partial absence of fallopian tube and ovary is a rare incidental finding usually in infertile patient. This report focuses on a fertile patient taken to diagnostic laparoscopy for missing intrauterine device of extrauterine location. Complete absence of right fallopian tube and ovary was found incidentally.

1. Introduction

Unilateral absence of the fallopian tube with adjacent ovary is an extremely rare event. Its incidence has been suggested to be 1/11,240 in an infertile population (Pabuccu et al., 2011). Torsion or congenital defect might be the possible etiologic factors. However vascular event stands in the forefront of the suggested etiologies.

2. Case Report

A 30-year-old healthy woman with history of missing intrauterine device admitted to our gynecologic clinic. The patient had no past surgical history and had a healthy child born by normal vaginal delivery. Her physical exam was completely normal, while a transvaginal ultrasound revealed no hyperechogenic sign of the intrauterine device. Her pelvic X-ray revealed that intrauterine device was missed and probably extrauterine. She was taken to diagnostic laparoscopy to identify the location of intrauterine device. In laparoscopy complete absence of right fallopian tube and adjacent ovary was found incidentally (Fig. 1 and 2). Intrauterine device was found between omentum and gut. It was removed totally and no gut injury was seen afterwards. Post-operative intravenous pyelogram (IVP) showed the normal urinary tract in our patient.

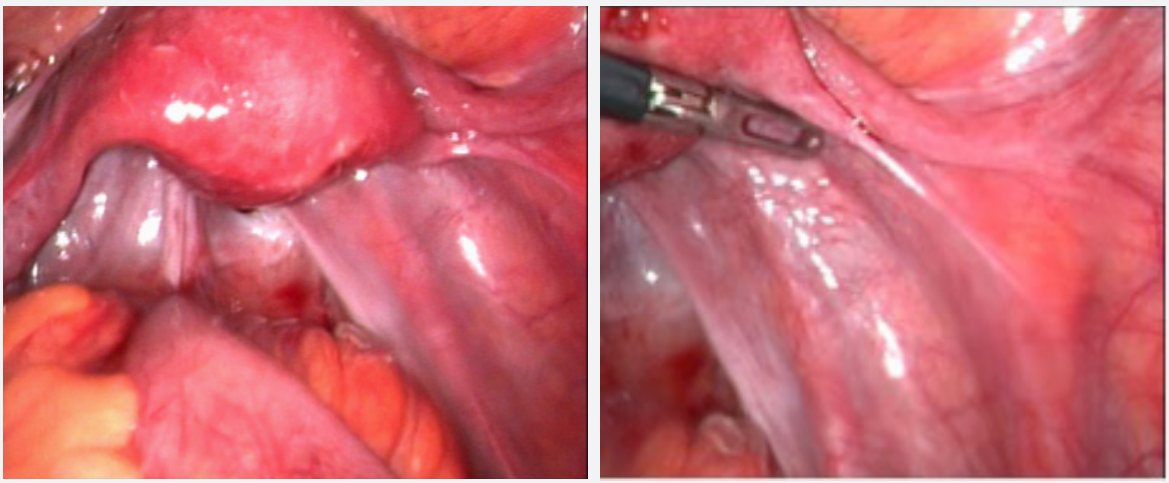

Fig. 1-2. Laparoscopic view of complete absence of right fallopian tube and adjacent ovary

3. Discussion

Partial or complete absence of fallopian tube, a rare occurrence (Nawroth et al., 2006), is usually asymptomatic and typically only discovered by histerosalpingography or diagnostic laparoscopy during workup for infertility (Yazawa et al., 2010). Our case was first case in literature about unilateral absence of fallopian tube and ovarian agenesis in a fertile woman. It was an incidental finding during laparoscopy, its real incidence in fertile woman is unknown.

Congenital fallopian tube anomalies include accessory ostia (Beyth and Kopolovic, 1982), multiple lumina (Daw, 1973), duplication (Eustace, 1992), complete absence or segmental deletion of different regions of the fallopian tube (Yazawa et al., 2010). A comprehensive literature search performed by Nawroth et al. in 2006 only identified 18 patients with partial atresia of the fallopian tubes (Nawroth et al., 2006). All cases reported in literature were discovered accidentally or during procedures to investigate primary infertility (Eustace, 1992) and in some the partial or complete absence of ovary or tube is associated with uterine anomaly and urinary tract anomaly (Suh and Kalan, 2008).

The reason given is that the development of the genital tract is partially shared with the development of the urinary and genital tract. But of the 28 cases reported in literature describing unilateral agenesis of ovary and fallopian tube, only four were associated with urinary tract anomalies (Vaiarelli et al., 2012). Five were associated with the absence of ovary and/or tube and uterine anomalies (Vaiarelli et al., 2012). Another 18 reports were associated with a normal uterus and in five cases there was no mention of uterine anomalies. The concomitant presence of endometriosis is reported in only three cases (3/28 cases, 9 %) (Vaiarelli et al., 2012). In our case, our patient had no urinary system abnormalities.

Two possible etiopathogenic causes may result in this rare condition of partial absence of fallopian tube, congenital absence or torsion. Congenital absences are frequently associated with developmental alterations of the mesonephric and paramesonephric ducts. The mesonephric duct becomes apparent in the embryo at approximately five weeks while the pair of paramesonephric ducts, located laterally to the mesonephric ducts, becomes apparent at seven weeks. Other possible causes: a) an asymptomatic torsion of the adnexa (ovary and tube), followed by ischemia and reabsorption (Sivanesaratnam, 1986; Eustace, 1992; Paternoster et al., 1998; Muppala et al., 2008), b) an underlying vascular anomaly causing ischemia.

In summary, complex malformations of female genital tract, like unilateral absence of the ovary and the fallopian tube, with or without endometriosis, are not very common and a clear etiology for these anomalies is not known. Despite several classification systems have been proposed for Mullerian tract anomalies (Acien and Acien, 2011), those involving also the gonads remain "orphan of a classification" and are mostly justified as vascular accidents.

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