VOLUME - 12, ISSUE - 08, AUGUST - 2023 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper | Obstetrics & Gynaecology

UNILATERAL PARTIAL ABSENCE OF FALLOPIAN TUBE: CASE SERIES OF THREE PATIENTS

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ABSTRACT Congenital and structural abnormalities of fallopian tubes are rare among the abnormalities of female urogenital system. Partial absence of fallopian tube is an uncommon condition.We report three cases of partial absence of fallopian tube diagnosed incidentally during diagnostic laparoscopy in women with infertility. Thus, a rare possibility of this entity should be kept in mind in women being worked up for infertility.

KEYWORDS : Congenital, fallopian tube, partial absence, Mullerian anomalies, infertility, laparoscopy, torsion

INTRODUCTION

Mullerian anomalies are frequently seen in clinical practice [1-3]. Most common to be encountered are those of uterus followed by vagina and cervix. Developmental anomalies of fallopian tubes and ovaries are very rare to be seen. As only few cases have been reported in literature, incidence has been difficult to determine [4]. Absence of fallopian tube is usually asymptomatic and is incidentally discovered during laparoscopy or laparotomy for some other cause. The exact etiology remains unclear. We here report a case series of three women with partial absence of fallopian tube that was diagnosed incidentally during diagnostic laparoscopy as a part of infertility evaluation.

Case Report 1

Ms. X, 28year old woman, presented to gynecology OPD as a case of secondary infertility with hypothyroidism. The woman was married for 13 years and was regularly staying with husband. Her previous menstrual cycles were normal. Her past history and family history was insignificant. She had no history of any surgery in the past. Her AMH was slightly raised (7.47), TSH was normal and HSG showed right cornual block with normal left tube. Other hematological and biochemical investigations were normal. Her general and gynecological examination was normal. Since she had taken 6 cycles of ovulation induction and 3 cycles of IUI, patient was taken up for diagnostic hysteroscopy and laparoscopy. On hysteroscopy, uterine cavity was normal. Right and left ostia were seen and seem patent. On laparoscopy, uterus was normal in size and shape. Bilateral ovaries and left sided fallopian tube were normal. Right fallopian tube was around 2-3 cm and a gap was seen at isthmic part of fallopian tube (figure 1). On chromopertubation, free spill was seen on left side and no spill seen from right side. Her postoperative period was uneventful. Patient was planned for spontaneous conception for 2 cycles followed by ovulation induction.

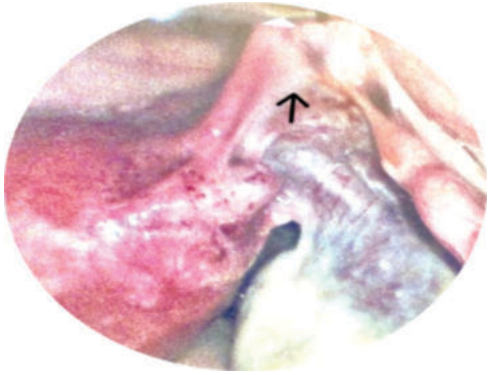

Figure 1: Laparoscopic view showing absence of isthmic part of right fallopian tube.

Case Report 2

Ms. Y, 27year old woman, also presented to gynecology OPD as a case of secondary infertility. She was married for 10 years and was staying regularly with husband. She had one cesarean delivery 3 years after marriage but baby died due to pneumonia at 9 months of age. Her previous menstrual cycles were regular and nothing significant was revealed in past and family history. There was a history of cesarean section in the past. Husband semen analysis was within normal limits. Serum TSH, serum Prolactin and AMH were normal. Her HSG showed left sided cornual block. Her general and gynecological examination was unremarkable. The woman was taken up for diagnostic hysterolaparoscopy. On hysteroscopy, uterine cavity was found to be normal. Bilateral ostia visualized but right and left ostia seemed to be blocked. On laparoscopy, uterus was normal in size and shape but appeared hyperemic. Right fallopian tube was hypoplastic, about 1 cm in length at cornual end, rest of the tube was not visualized. Left fallopian tube was convoluted, nodular in isthmic area and fimbrial end was shorter in length (figure 2). On dye test, bilateral tubes were blocked. No dye spill was seen in peritoneal cavity. Right ovary appeared cystically enlarged and left ovary was normal. POD was clear. Patient was planned for IVF. Postoperative period was uneventful.

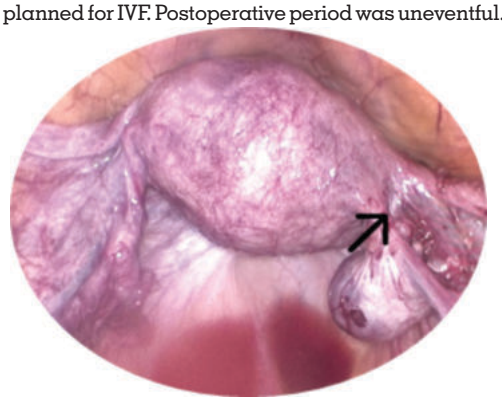

Figure 2: Laparoscopic view showing hypoplastic right fallopian tube at cornual and absence of rest of the fallopian tube.

Case Report 3

Mrs. Z, 28year woman, presented to gynecology OPD as a case of primary infertility. She was married for 5 years and was trying to conceive since 3 years. Her previous menstrual cycles were normal. Her husband had varicocoele resulting in oligospermia and was taking treatment for same. Her past and family history was normal. She had no history of surgery in the past. Her HSG showed fusiform endometrial canal with single fallopian tube with no spillage suggesting unicornuate uterus with fimbrial block. The woman was posted for

diagnostic hysteroscopy and laparoscopy. On hysteroscopy, uterine cavity appeared small and tubular. Bilateral ostia were not visualized. Adhesiolysis was done with scissors and adequate uterine cavity was created. On laparoscopy, uterus appeared normal in size and shape. Only the fimbrial end of right fallopian tube was seen. Proximal part of the tube was not visualised. On left side, 2-3 cm of proximal part of the tube was seen which appeared dilated, middle part was absent and small fimbrial end was seen (figure 3). Bilateral ovaries were normal. On dye test, no spillage of dye was seen. Patient was planned for relook hysteroscopy followed by IVF. Her postoperative period was uneventful.

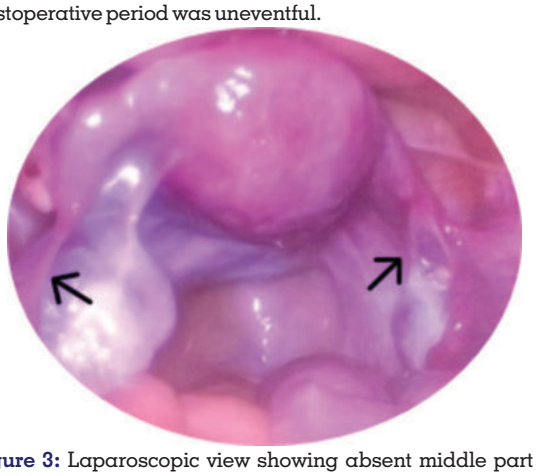

Figure 3: Laparoscopic view showing absent middle part of left fallopian tube and absent proximal and middle part of the right fallopian tube.

DISCUSSION

Congenital absence of fallopian tube is a rare occurrence among all the Mullerian anomalies. Various congenital anomalies of fallopian tubes have been described in literature like accessory ostia, multiple lumina [5], duplication [6], complete absence [7] or segmental deletion of different parts of fallopian tube [8]. But these anomalies are mostly discovered incidentally when the woman is taken up for surgery due to some other cause. There are only few case reports describing the partial or complete agenesis of fallopian tube in which uterus was normal. In few cases it was associated with absence of ovary. Nawroth et al. (2006) performed a comprehensive literature survey and reported only 18 patients with partial atresia of the fallopian tubes out of which 14 cases showed unilateral partial tubal atresia, however 4 cases were associated with uterine anomalies [4]. Uckuyu et al. (2009) reported three cases of partial tubal atresia with an incidence of 3 in 2,550 (1/850) females who underwent laparoscopy or laparotomy at their institute [9]. In addition, Sevanesaratnam (1986) suggested that the incidence of unilateral congenital ovarian and fallopian tube agenesis is 1 in 11,240 [4]. Another comprehensive literature survey performed by Yazawa et al. (2010) showed that only 3 out of 30 patients with partial absence of fallopian tube were complicated with ipsilateral ovarian absence [10]. There are few other rare case reports available in literature [10-15].

There are two possible etiopathogenesis of the partial or complete absence of fallopian tubes. Combined congenital absence of mesonephric and paramesonephric ducts result in absence of uterine horn, fallopian tube, kidney and ureter of the affected side. Partial unilateral paramesonephric duct defects result in failure of development of varying amounts of the fallopian tube [16]. Defect localized to the region of genital ridge and inadequate blood supply to the caudal part of paramesonephric duct during development may also result in failure of fallopian tube formation [11]. Asymptomatic torsion of one or both adnexa which can occur during childhood, adult life or in utero also can lead to avascular necrosis and reabsorption of the tissue (ovary and or fallopian tube) [9,17].

According to the VCUAM (vagina cervix uterus adnex-associated malformation) classification, our patients in the case series belong to class – A1a i.e., unilateral tubal malformation, ovary normal [18].

For most of the cases reported to date, the true etiology of partial absence of fallopian tube remains unclear. Absence of other urogenital anomalies suggest torsion or a vascular event as the cause, rather than a developmental anomaly.

CONCLUSION

Complete or partial absence of fallopian tube is a rare occurrence. The cause could be either congenital associated with mullerian anomalies or secondary to torsion which may be asymptomatic. Asymptomatic torsion could be followed by either auto-amputation or resorption. These cases are usually encountered when the woman is taken up for surgery for some other reason. Laparoscopy is a feasible option as a diagnostic tool for these cases.

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