Case report

Laparoscopic Finding of a Segmental Absence of the Right Fallopian Tube: A Case Report

Foumane P [1], Aguh VF [1], Moifo B [1], Esiene A [1], Guegang E [1], Mboudou ET [1].

[1]Faculty of Medicines and Biomedical Sciences, The University of Yaounde 1, Yaounde Cameroon

Corresponding author: *Dr Foumane Pascal, Yaounde Gynaeco-Obstetric and Paediatric Hospital, PO Box 4362 Yaoundé, Cameroon. Email: pfoumane2004@yahoo.fr*

.

ABSTRACT

Laparoscopic Finding of a Segmental Absence of the Right Fallopian Tube: A Case Report

Segmental absence of the fallopian tube is a finding that has been rarely described. One of such case is reported in a 26-year-old lady with six years past history of primary infertility. The anatomical abnormalities were discovered during investigations for primary infertility. The hysterosalpingography was suspicious of a left proximal obstruction of the right fallopian tube and phimosis of the right one. Absence of the right isthmo-ampullary segment and a macroscopically normal right ovary were confirmed at the laparoscopic session. Two possible scenarios are proposed. The first involves congenital absence due to a defect in the development of the corresponding portion of the right mullerian duct. Alternatively, the absence may be an asymptomatic torsion with subsequent atresia of the isthmo-ampullary segment of the uterine tubes.

Keywords:
fallopian tube agenesis, fallopian tube atresia, fallopian tube obstruction, hysterosalpingography, laparoscopy, Cameroon

RESUME

Découverte cœlioscopique de l'absence d'un segment de la trompe de Fallope droite – À propos d'un cas.

L'absence d'un segment de la trompe de Fallope est une découverte opératoire rarement décrite. Nous rapportons un cas chez une femme de 26 ans suivi pour infertilité primaire évoluant depuis six ans. Une hystérosalpingographie avait évoqué une obstruction tubaire proximale gauche et un phimosis tubaire droit. L'absence du segment isthmo-ampullaire de la trompe droite en présence d'un ovaire homolatéral droit a été objectivée à la cœlioscopie. Deux explications possibles ont été proposées. Premièrement une absence congénitale de cette portion de la trompe droite liée à un défaut de développement de la portion correspondante du canal de Müller droit. Ensuite, l'absence pourrait être due à une torsion asymptomatique de l'annexe droite suivie d'une atrésie du segment isthmo-ampullaire de la trompe.

Mots-clés:
agénésie tubaire, atrésie tubaire, obstruction tubaire, hystérosalpingographie, cœlioscopie, Cameroun.

CASE REPORT:

A 26-year-old lady presented with a 6-year history of primary infertility. Her menarche had been at age 14 years, and she had always had a regular 25-26 day cycle with 4 days of light bleeding. She denied any history of past illnesses nor surgery and no abdominal surgical scar was observed.

On examination she was a fit, healthy young woman weighing 59.5 kg and measuring 1.63 m in height, with normal development of secondary sexual characteristics. General speculum and vaginal examinations were normal. Her husband is 33 year-old with a 4 year-old child from an extra – marital affair. His semen analysis was normal. An endovaginal pelvic ultrasound done was normal. Hysterosalpingography showed phimosis of left tube with sequellae of left salpingitis, and a proximal obstruction of left fallopian tube.

At laparoscopy she was found to have a normal uterus with normal round ligaments and ovaries, and a left uterine tube with signs presumptive of phymosis of the fimbriatic end. The isthmo-ampullary segment of the right uterine tube was absent. There was fill or spill of dye on the left side after fimbroplasty as compared to the right side where there was no fill or spill of dye. There were type I adhesions in the pelvis. The patient was later counseled on full explanation of findings upon discharge.

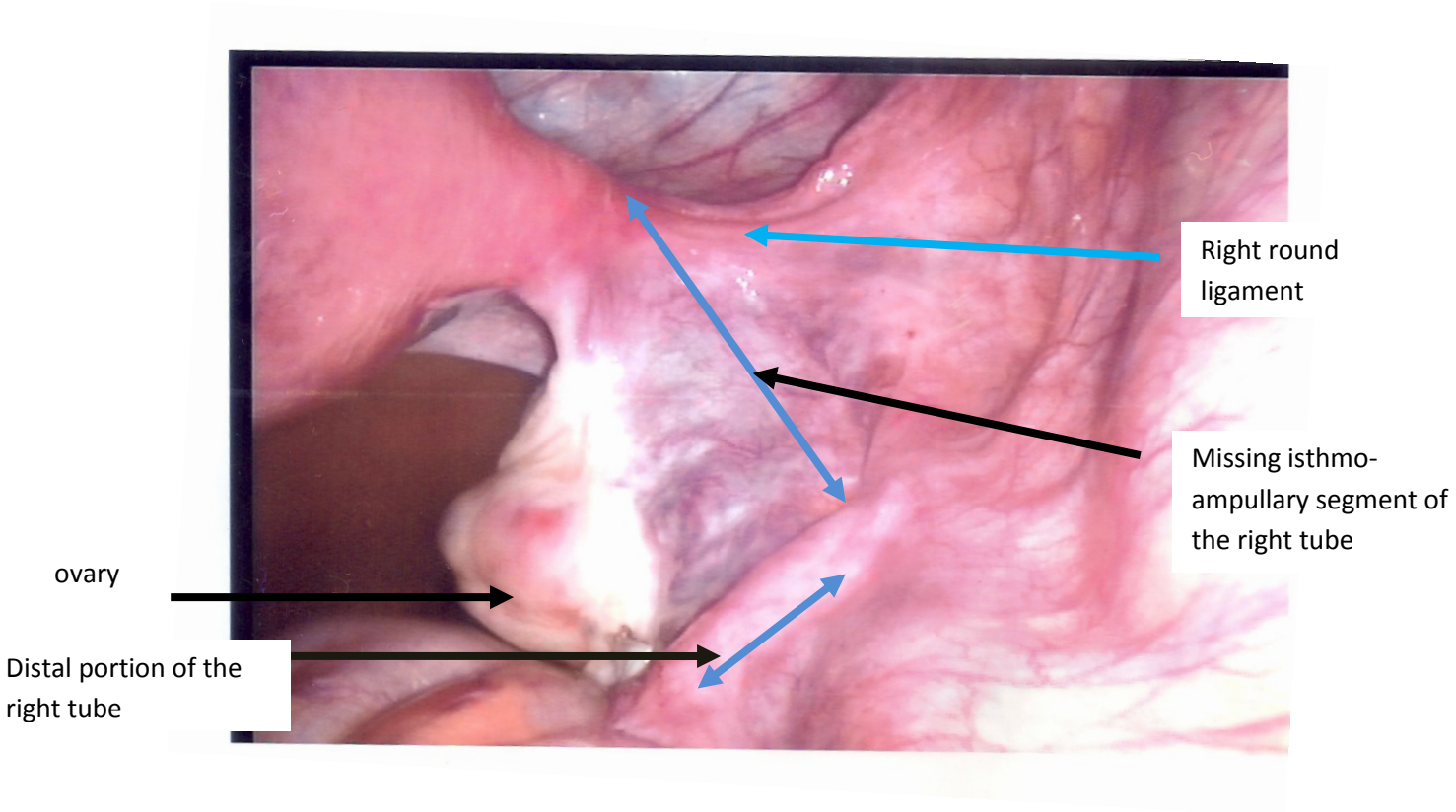

Figure 1: Laparoscopic image showing segmental absence of the right isthmo-ampullary segment.

DISCUSSION

There have been several reports of unilateral absence of components of the adnexa in the last 5 decades, however, the total number of cases remains small, and only a few cases of segmental absence of the fallopian tube have been reported [1,2]. Two mechanisms might explain this observation: torsion and congenital absence.

Torsion

Torsion during adult life or childhood is usually associated with severe abdominal pain, nausea and vomiting. However, symptoms may be minimal and non-specific [3, 13], or even absent [4], especially when torsion occurs during pregnancy. All such cases described have had evidence of scarring and adhesions on the affected side suggesting that torsion and subsequent absorption could have taken place. In other instances with no symptoms [5, 6] loose ovoid structures have been found in the pelvis in association with unilateral absence of a tube. Histological examination of these has confirmed calcified, infarcted ovarian tissue. Thus the lack of any classic history of symptoms does not preclude the diagnosis of torsion.

In childhood, torsion occurs most commonly between the ages of 8 and 10 years [7], being very rare below the age of 2 years. It is usually misdiagnosed initially as appendicitis.

As in the adult, torsion most often occurs in association with an ovarian cyst, which is usually a dermoid [7, 14]. Torsion of the normal annexes in childhood has also been described [8]. There has also been one case described in which torsion appeared to have occurred in a fetus during the intrauterine period, the diagnosis being made at a postmortem examination [9]. The role of ovarian cysts and tubal swellings in the etiology of torsion is well recognized, and torsion occurs most frequently during pregnancy and menstruation.

A mechanism for torsion in cases where there is no obvious adnexal abnormality is less clear. Auvray [10] has suggested that the spiral course that the tube describes during fetal development may persist in the adult as a congenital anomaly. The passive congestion that may occur during pregnancy or menstruation would then predispose to increasing rotation and resultant torsion. It has been postulated [11] that premenarcheal hormonal activity may result in venous congestion and subsequent torsion. The risk of torsion may be increased by an abnormally long mesosalpinx or mesovarium [11, 12].

In our case, the absence of signs of past inflammation of the remaining portion of the tube as well as the normal macroscopic appearance of the ovary is less suggestive of torsion.

Congenital absence

Where there is a combined absence of all of the mesonephric and paramesonephric duct derived systems on the affected side, that is horn of uterus, round ligament, broad ligament, fallopian tube, kidney and ureter, a developmental basis is clear.

However, in the remaining cases such as that described , where there is normal development of the uterus and its associated ligaments together with abnormal urinary tract, an explanation for absence of tubes and/or ovary is less straightforward. As Chan and Leeton [2] suggest, the likelihood of bilateral asymptomatic torsion occurring must be considered unlikely. Is there an embryological explanation for these findings?

The paramesonephric (Miillerian) ducts first appear on the posterior abdominal wall of the embryo at 6 weeks. The cranial end of the duct would usually remains as the ostium of the fallopian tube and subsequently develops fimbriae. The caudal end grows caudally to reach the pelvic region where, from its original position lying lateral to the mesonephric duct, it passes in front to lie on its medial side and continues to grow down until it fuses distally with the paramesonephric duct from the other side to form a solid bud which finally reaches the urogenital sinus. The part of the duct that lies lateral to the mesonephric duct will form the lateral part of the fallopian tube; the portion of the duct that crosses the mesonephric duct will form the medial part of the tube; and the distal, fused portion will form the uterus and a variable amount of the vagina. Continued growth of the tube occurs during the fourth and fifth months involving considerable elongation and spiraling. It is possible that during this phase of development the local blood supply to the caudal

part of the Mullerian duct, or to the cells of the genital ridge, or to the primitive ovary, might be compromised. This might result in the complete absence of that ovary and/or a failure of development of a variable amount of the fallopian tube. This is more probable in our case.

This is the first case of laparoscopically discovered segmental absence of the fallopian tube ever reported in Sub Saharan Africa with congenital mullerian duct development as the most probable etiology.

COMPETING INTERESTS

The authors declare none

REFERENCES

1. Gautier P, Benoit M, Desmons F. A propos d'un cas d'absence congénitale des trompes de Fallope. Le problème des nodosités isthmiques des trompes. J Gynecol Obstet Biol Reprod 1972; l (5 Suppl 2):410.
2. Chan LK. Lceton JF. A case report of bilateral absence of fallopian tubes and ovaries. Asia-Oceania J Obstet Gynecol 1997:13:260.
3. Rochet Y. Dargent D. L'amputation spontanée des annexes: a propos de 4 observations. Bull Fed Soc Gynecol Obstet Lang Fr 1968;20(3):285-6.
4. Nissen ED, Kent DR, Nissen MD et al. Unilateral tubo ovarian amputation. J Reprod Med 1977; 19:151.
5. Georgy FM. Viechnicki MB. Absence of an ovary and uterine tube. Obstet Gynecol 1977; 44:441.
6. Sebastian JA, Baker RL, Cordray D. Asymptomatic infarction and separation of the ovary and uterine tube. Obstet Gynecol 1973; 41: 531.
7. Smith RR, Butler WJ. Concerning torsion of the uterine adnexa occurring before puberty together with a consideration of torsion of normal adnexa: report of a case and a review of the literature since 1900. Am J Obstet Gynecol 1921; 5: 507.
8. James DF, Hugh RK, Barber RK et al. Torsion of normal uterine adnexa in children. Report of three cases. Obstet Gynecol 1970; 35: 226.
9. Dresler S. Antenatal torsion of a normal ovary and fallopian tube. Am J Dis Child 1977; 31: 236.
10. Auvray. Un cas de torsion spontante de la trompe et de l'ovaire normaux. Bull Soc Obstet Gynecol 1912; 1: 727.
11. Berger J, Sauvage P. Torsion of the ovary in young girls: Report of two cases. Ann Chir Inf 1970; 11: 235.
12. Lashgari M. Absence of ovary. Obstet Gynecol 1975:46:115.
13. Damian LS, Eutace. Eur J Obstet Gynecol Reprod Biol. 1992; 46(2): 157.
14. Kriplain A, Takkar D. Unexplained absence of both fallopian tubes and ovary in the omentum. Arch Gynecol Obstet 1995;256: 111