Case Report

Ectopic Ovary With Dermoid Cyst as a Result of Possible Asymptomatic Autoamputation

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Abstract

A 32-year-old woman, who presented for laparoscopic sterilization after two full-term normal deliveries, was incidentally diagnosed to have a left-sided complex cyst in the pouch of Douglas (POD). She had no history of previous surgeries or any symptoms of lower abdominal pain, nausea, or vomiting in the past. She underwent laparoscopy, and the left ovary and distal portion of the fallopian tube were absent in their normal position. An ectopic left ovary with dermoid cyst was noted in the POD. The right ovary and tube were in their normal position. I attribute this to be a very rare case of asymptomatic torsion and autoamputation of the ovary resulting in an ectopic ovary.

Keywords: *Asymptomatic autoamputation, ectopic ovary, ovarian autoamputation, ovarian dermoid cyst, wandering ovary*

Introduction

Ovarian autoamputation is an extremely rare phenomenon of uncertain etiology, with very few cases reported in literature.[1] I report a rare case of possible asymptomatic autoamputation of the left ovary containing a dermoid cyst, along with the distal part of the fallopian tube, presenting as an ectopic ovary in the pouch of Douglas (POD) of a 32-year-old patient.

Case Report

A 32-year-old patient presented for laparoscopic sterilization after two previous normal deliveries. She did not have any history of surgeries or significant symptoms such as abdominal pain, nausea, or vomiting. On routine ultrasound, a left-sided complex cyst measuring around 6 cm was noted in the POD region. Laparoscopy was performed under general anesthesia. The uterus and right adnexa were normal. Left adnexal adhesions were noted [Figure 1], and after adhesiolysis [Figure 2], the left ovary and the distal portion of the ipsilateral fallopian tube were found to be absent. The left ovary was found in the POD, buried in adhesions to the pelvic sidewall and the rectum [Figures 3 and 4]. The ovary was released, and no major vessels or ligamentous attachments were noted on the ovary [Figure 5]. Adhesion to the rectum was most difficult to release and showed a few strands of hair within the adhesion bands [Figures 6 and 7]. After releasing the ovary, it was bisected to reveal a large dermoid cyst [Figure 8]. The specimen was extracted *in toto* using an endobag. The postoperative period was uneventful.

Discussion

Autoamputation of the ovary is a rare event potentially induced by infarction subsequent to ovarian torsion or torsion of a dermoid cyst. The torsion of the pedicle, occurring in 16.1% of ovarian dermoid cyst cases, has been reported to be a pivotal factor for the development of new ectopic ovary.[1]

Ultrasonography and color Doppler may be useful in diagnosing ovarian torsion in symptomatic cases. However, in cases with obscure clinical signs and symptoms, a definitive diagnosis of torsion remains challenging.[2,3]

The pathophysiology of ovarian torsion involves the twisting of the vascular pedicle in the suspensory ligament causing obstruction to vascular and lymphatic

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Table 1: List of reported cases on unilateral or bilateral absence of adnexa with or without ectopic ovarian cyst

Reference	Age	No. of cases	Absence of the ovary and fallopian tube		Ectopic ovary		Location of the ectopic ovary or fallopian tube	Preoperative diagnosis	Histology of cyst
			Unilateral	Bilateral	W/ cyst	W/o cyst			
Present study	32	1	+ (fimbrial portion of the tube)	–	+	–	Ectopic ovary with cyst was present in the POD	Diagnosis of a left side cyst was present in the POD by ultrasound	Dermoid cyst
Tanaka *et al.*[4]	32	1	+	–				Diagnosis of mature cystic teratoma of the right ovary	
Pabuccu *et al.*[5]	27	1	+	–	–	+	NS	–	–
Nishiyama *et al.*[6]	25	1	+ (ovary)	+ (Middle portion of the tubes)	–	+	Ectopic ovary	A cyst of the ovary	Dermoid cyst
Uckuyu *et al.*[7]		4	+ (	–	–	+	NS	Abnormality on hysterosalpingography	–
Olufowobi *et al.*[8]		1	+	–		+	A solitary mass was present in the omentum	Polycystic-appearing left ovary	
Dueck *et al.*[9]	Female infant	1	+	_	_	+	Left fallopian tube was found tightly stretched over the sigmoid colon to the left retroperitoneum	Right ovarian cyst	
Gold[10]	23	1	–	+	–	+			
Kriplani *et al.*[11]		1	–	+	+	–	Ectopic ovary with cyst was present in the omentum	Infertility	Dermoid cyst
Eustace[12]		2	+			+			
Sharony *et al.*[13]		1	+	–	–	+		Diagnosis of tubal pregnancy and the absence of the contralateral fallopian tube and ovary by TVS	
Chan *et al.*[14]		1		+					
Sivanesaratnam[15]		1	+	–					
Sinha[16]		1	+			+			
Ali *et al.*[17]		1	+						
Sirisena[18]		1	+			+			
Nissen *et al.*[19]		6	+						
Georgy *et al.*[20]		1	+						
Burge[21]	19	1	+						
Stone[22]		1	+						

NS = not stated in the abstract; TVS = transvaginal scan.

Table 2: List of reported cases of autoamputated ovary associated with dermoid cyst or teratoma

Reference	Age	Location	Autoamputation side of the ovary	Preoperative diagnosis	Ovarian tissue	Histology
Peh *et al.*[23,25]	33	Cul-de-sac	Right ovary	–	Present	Dermoid cyst
Kusaka *et al.*[24]	24	Cul-de-sac	Left ovary	Ovarian cyst	Present	Mature cystic teratoma
Peitsidou *et al.*[1]	33	Cul-de-sac	Right ovary	–	Present	Dermoid cyst
Present study	32	POD	Left ovary along with the fimbrial portion of the left fallopian tube	A cyst in the POD	Ovary containing the cyst was present	Dermoid cyst

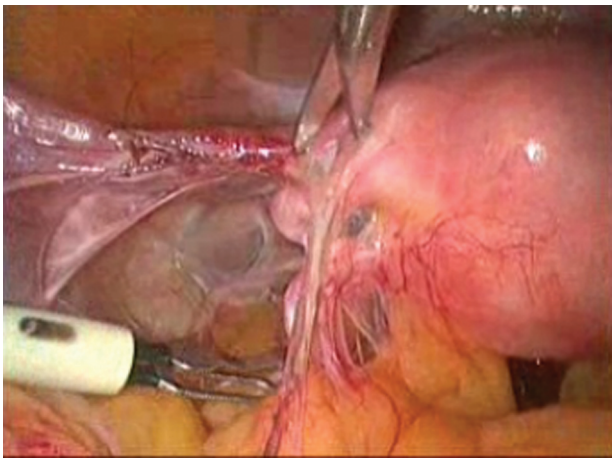

Figure 1: Release of left adnexal adhesions

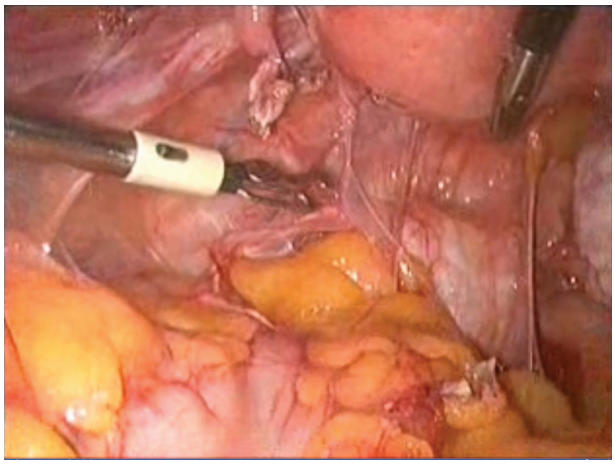

Figure 2: Absent left ovary and distal portion of the left Fallopian tube

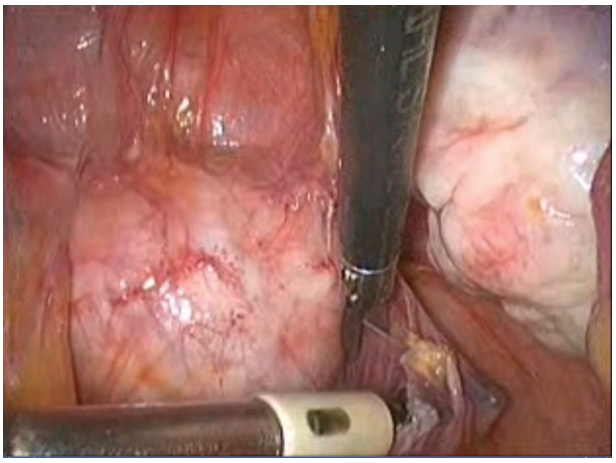

Figure 3: Ectopic left ovary in the cul-de-sac

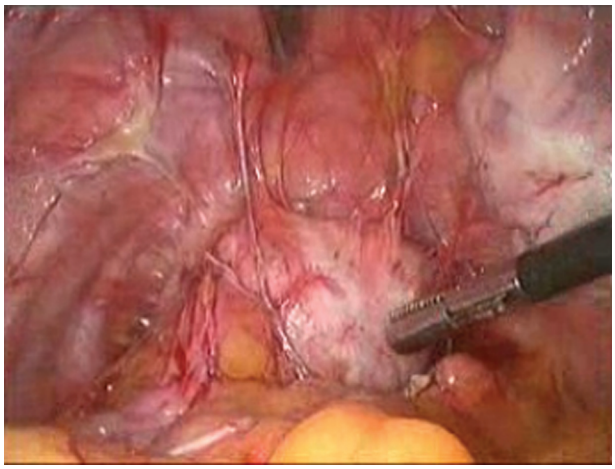

Figure 4: Left ovary with dermoid cyst in the POD with adhesions over it

outflow. This leads to diffuse ovarian edema and enlargement, which over a period may result in ischemia and infarction of the ligament. Some of the common predisposing factors causing the ovary to swing on its vascular pedicle include ovarian enlargement as seen in ovarian tumors or ovarian hyperstimulation syndrome, excessive mobility of fallopian tubes or mesosalpinx, elongated pelvic ligaments, fallopian tube spasm, strenuous exercise, or abrupt intra-abdominal pressure changes.[3]

Dermoid cysts are the most common germ cell tumors and account for up to 25% of all ovarian tumors.[2] Parasitic dermoid cysts, an extremely rare entity, develop due to autoamputation of the ovaries following subacute or chronic torsion, and implantation elsewhere. Consequently, an inflammatory response might occur, resulting in the adherence of the dermoid cyst to adjacent structures and the development of new microvasculature. Parasitic dermoid cysts might also occur when it grows within a supernumerary or ectopic

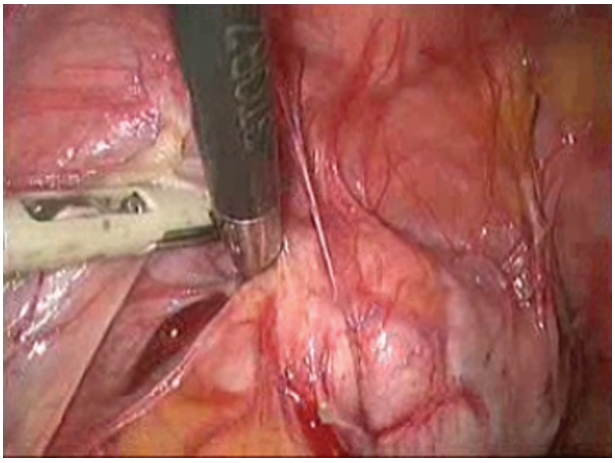

Figure 5: Adhesiolysis of left ectopic ovary

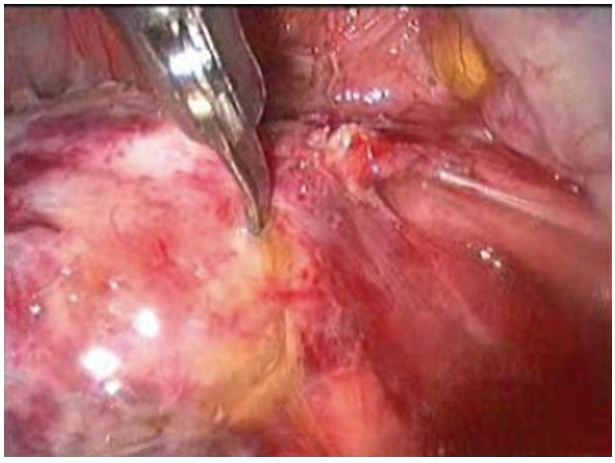

Figure 6: Release of adhesions between rectum and ectopic ovary

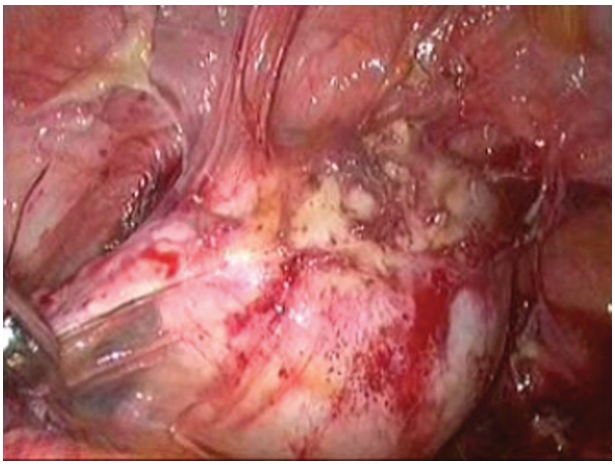

Figure 7: Left ectopic ovary in POD after adhesiolysis

Figure 8: Bisected ovary containing dermoid cyst

ovary, which develops subsequent to the implantation of ovarian tissue after surgery or inflammatory response. It has to be noted that supernumerary ovaries might also occur as a congenital defect.[24]

A search of articles from 1949 to 2012 in the PUBMED database was conducted to find the number of reported cases with the absence of adnexa. Out of the 27 cases identified, 24 unilateral and three bilateral absences of adnexa were documented. The current case study's clinical findings of the unilateral absence of adnexa associated with ectopic ovarian dermoid cyst were compared with other reported cases [Table 1]. The number of cases reported with unilateral absence of adnexa associated with ectopic ovarian dermoid cyst was nil. Only one case of bilateral absence of the ovaries and fallopian tubes with the ectopic ovary containing a dermoid cyst present in the omentum was found. Thus, the absence of the left ovary and the fimbrial portion of the left fallopian tube with ectopic ovary present in the POD as in this case has not been reported yet.

A review of literature suggests that this case is also unique compared to other reported cases of ovarian tumors present in POD [Table 2] owing to the unilateral absence of adnexa and the presence of cyst within the ovary.

In the current case study, the absence of apparent nourishing vessels in the ectopic dermoid cyst would explain its existence to torsion or inflammation rather than a developmental defect.[24,25] However, the autoamputated ovary with the dermoid cyst found to be adherent to the retroperitoneum with minor adhesions may explain its existence as a parasitic ovarian dermoid cyst.[1]

This case did not have symptoms of lower abdominal pain, nausea, or vomiting. In such cases, the diagnosis of ovarian and fallopian tube torsion should be considered if there is an incidental finding of absent adnexa during exploratory laparoscopy. In the above-presented case, an ovary with a large dermoid cyst, densely adherent to the rectum, was removed by laparoscopy, and the postoperative period was uneventful.

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Conflicts of interest
There are no conflicts of interest.

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