

Successful Laparoscopic Management of a Large Ovarian Cyst: A Case Report on Rarest of Rare Paraovarian Cyst

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Abstract

Introduction: Paraovarian cysts occur in the broad ligament between the ovary and the tube, predominantly arising from mesothelium covering the peritoneum (68%) but also arise from the paramesonephric tissue (30%) and rarely from mesonephric remnants (2%). In this report, the authors present successful laparoscopic management of a large paraovarian cyst of mesonephric origin. *Case Report:* A 30-year-old P2L2 presented with oligomenorrhoea. On examination, BMI was 30Kg/m², hirsutism was present. Per abdomen examination revealed a mobile, cystic mass corresponding to 20 weeks' size. Ultrasonography of lower abdomen revealed a normal uterus and left adnexa and a mass of 11.6 x10 cm in the right adnexa. With a preoperative diagnosis of ovarian cyst in PCOS, she was taken up for laparoscopy, which showed a bulky left ovary and right ovarian cyst of 15x12cm with smooth wall and clear fluid. Histopathology revealed a mesonephric cyst. *Conclusion:* Physicians should maintain a high index of suspicion for this uncommon cyst which is often difficult to diagnose both clinically, radiologically and even intra-operatively. Large size should not deter the physician in taking recourse to the laparoscopic approach, provided the benign nature has been determined

preoperatively.

Keywords: Paraovarian; Mesonephric; Cyst; Laparoscopic; Rare.

Introduction

Paraovarian cysts occur in the broad ligament between the ovary and the tube, predominantly arising from mesothelium covering the peritoneum (68%) but also arise from the paramesonephric tissue (30%) and rarely from mesonephric remnants (2%) [1]. Paraovarian cysts constitute 10–20% of all adnexal masses [2]. In this report, the authors present successful laparoscopic management of a large paraovarian cyst of mesonephric origin.

Case Report

A 30 year old P2L2 presented with oligomenorrhoea of seven months' duration. Previous cycles were regular without any dysmenorrhoea and menorrhagia. On examination, BMI was 30Kg/m², normotensive, hirsutism was present. Per abdomen examination revealed a vertical scar of previous caesarean section and a mobile, cystic mass corresponding to 20 weeks size. On per speculum examination, no discharge was noticed and cervix, vagina were healthy. A cystic mass was felt through the right fornix, which was separate from the uterus. Ultrasonography of lower abdomen revealed a normal uterus and left adnexa and a mass of 11.6 x10 cm in the right adnexa. CA125-2.00, TSH-0.5 and Prolactin-5ng/ml. With a preoperative diagnosis of ovarian cyst in PCOS, she was taken up for laparoscopy, which showed a

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bulky left ovary and right ovarian cyst of 15x12cm with smooth wall and clear fluid (Figure 1). Right ovarian cystectomy and left ovarian drilling was done. The cyst had no attachments to the abdominal wall, intestine, or mesentery and it was successfully removed during the procedure. The uterus and bilateral fallopian tubes were normal. Post-operative period was uneventful and she was discharged on second post-operative day. Histopathology revealed a mesonephric cyst.

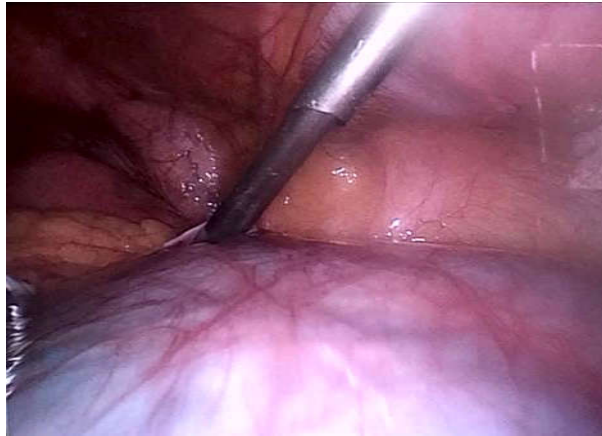


Fig. 1: Intraoperative photo during laparoscopy showing large mesonephric cyst on right side with normal sized uterus

Discussion

A study from Italy estimated the incidence of paraovarian cyst to be of about 3%, while an autopsy study of postmenopausal women detected them in about 4% of the cases [3,4]. They are common in all age groups but most frequently occur in third or fourth decade of life. However due to their frequent asymptomatic presence, the actual incidence is not known. Paraovarian cysts are often diagnosed intraoperatively or routine imaging investigations for another disease management. In our patient, despite moderate sized cyst, she did not complain of pain or distension. In fact, oligomenorrhoea was the presenting symptom and hence, ultrasonography was done to look for ovarian morphology of PCOS in view of hirsutism and obesity. Larger lesions of 20cm or more in diameter are symptomatic due to pressure and pain symptoms or may undergo complications like torsion or haemorrhage or rupture. Typical sizes reported are 1 to 8 cm in diameter [3]. The authors report a moderate sized cyst of 15 x 12 cm arising in a woman with PCOS. Paraovarian cysts are usually single, but bilateral lesions have been reported [5,6].

Clinically it is difficult to distinguish a paraovarian cyst from an ovarian cyst. Therefore, imaging is frequently used to reveal the diagnosis. Ultrasound

accurately diagnosed paraovarian cyst in 87.5% patients in a study by Gupta et al [7].

Simple paraovarian cysts are usually visualized as simple unilocular cysts with thin walls and smooth margins in the characteristic location of part of the mesosalpinx between the ovary and the fallopian tube. The tube and ovary are stretched over the smooth cyst wall, and the intact abutted ovary is separated from the cyst [7]. Absence of follicular structures, mobility of the mass, and dissociation from ovary when pushed by vaginal probe are the consistent ultrasound features of a paraovarian cyst [8].

Most patients (76%) with paraovarian cysts have a separate ipsilateral ovary which is seen by ultrasonography [9]. MRI may be useful when the ipsilateral ovary is not visualized separately or when neoplasia is suspected [7].

Differential diagnoses include dilated tube, endometrioma, functional cysts and peritoneal inclusion cysts. Kishimoto et al. described MR features of these cysts. Dilated tube represents tubular configuration, and endometrioma is multifocal and shows low signal intensity on T2 weighted MRI. The signal intensity of paraovarian cysts is low on the T1 weighted images and homogeneously high on the T2 weighted image [10].

A simple, asymptomatic paratubal or paraovarian cyst can be managed expectantly without further follow-up. Surgical exploration and removal is indicated for torsion or pain, pressure symptoms, or if suspicious findings are present on ultrasonography (septations, papillary projections, increased vascularity and solid components).

Laparoscopy is currently the most common surgical approach in the management of paraovarian cysts. Surgeons commonly use two techniques: the first includes the aspiration of the cystic fluid via the laparoscope, and the second includes the performance of a fenestration of the cyst before removing it.

We adopted the second approach and the large size cyst was successfully removed laparoscopically. The risk of both described procedures is the spillage of a neoplastic cyst, with intraperitoneal dissemination of any existing malignant cells.

Therefore, it is very important to differentiate the simple paraovarian cyst from the neoplastic paraovarian one, before deciding the surgical approach. Paraovarian cysts are generally benign but many, on rare occasions give rise to borderline tumours and malignancy. Malignancy has been reported in 2-3% of cases, although this is rare in lesions smaller than 5 cm [11].

Conclusion

Physicians should maintain a high index of suspicion for this uncommon cyst which is often difficult to diagnose both clinically, radiologically and even intra-operatively. Large size should not deter the physician in taking recourse to the laparoscopic approach, provided the benign nature has been determined preoperatively.

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