

Paraovarian Cyst Mimicking Mesenteric Cyst: A Case Report

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Abstract

Paraovarian cysts are cystic lesions occurring adjacent to the ovaries in women of reproductive age group. We present a case of a 30 year old female presenting with a lump in the abdomen. She was initially suspected on clinical and radiological examination to have a mesenteric cyst. However, exploratory laparotomy revealed it to be a paraovarian cyst. Histopathology confirmed it to be serous cystadenoma. The relevant discussion focuses on the clinical features, diagnosis, treatment and outcome of patients with paraovarian cysts.

Introduction

Paraovarian cysts, constituting 10-20% of all adnexal masses, arise from the broad ligament, usually from mesothelial and paramesonephric elements or, rarely, from mesonephric remnants.¹ Paraovarian cysts occur over a wide age range, most commonly in the third and fourth decades.² Most of them are asymptomatic but rarely they become large in size and cause clinical symptoms such as increase abdominal girth, lower abdominal pain.³ They are rarely considered in the differential diagnosis of lumps that clinically resemble mesenteric/omental cysts. We present the case of a 30 year old woman with a left sided paraovarian cyst that presented as a lump in abdomen initially suspected as a mesenteric cyst.

Case Report

We present the case of a 30 year old female who presented with a lump in the abdomen since 2 years. The patient had no other relevant complaints. Her bladder and bowel habits were regular. Her menstrual history was unremarkable. She was married since

the last ten years and had two living children. Clinical examination revealed a lump in the abdomen, with a smooth surface, firm consistency and freely mobile within the abdomen. A clinically mesenteric or omental cyst was suspected. Ultrasonography revealed a mesenteric cyst measuring 11 cm x 8 cm x 4 cm, separate from the ovaries which were normal. Her haematological profile was normal. She was worked up for surgery. Exploratory laparotomy revealed a paraovarian cyst arising adjacent to the left fallopian tube with bilateral ovaries, tubes and the uterus being normal (Fig. 1). Cyst was excised. Histopathologic examination of the specimen revealed it to be a paraovarian serous cystadenoma. Her



Fig. 1 : Intra-operative figure showing left paraovarian cyst with both ovaries and fallopian tubes being normal.

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postoperative course was uneventful. Follow-up of six months has shown her to be both symptom and disease free. This is a unique case of a paraovarian serous cystadenoma mimicking as mesenteric cyst.

Discussion

In the adnexal structures (e.g., broad ligament, round ligament) a variety of cysts and tumours arise. These lesions which originate from peritoneal inclusions or embryonic remnants (Mullerian or Wolffian systems) are usually benign. Most of them are small, multiple as well as are not associated with any clinical symptoms. Paraovarian and paratubal cysts are usually found in the mesosalpinx between the ovary and fallopian tube. Paraovarian cysts can be seen at any age but are most commonly encountered in the third and fourth decades.² In spite of causing rare symptoms, complications due to torsion, internal haemorrhage from rupture and massive size can be seen.⁴ Serous cysts of Mullerian origin most commonly occur in or adjacent to the ovaries;⁵ however cysts of Mullerian origin occurring separate from the ovaries and fallopian tubes are rare.⁵ Cases have been reported of perirenal serous cysts of Mullerian origin that mimicked exophytic renal cysts.⁶ However the literature does not specifically elaborate on cases of paraovarian cysts mimicking the diagnosis of mesenteric/omental cysts. Our patient presented with lump and was diagnosed clinically to have a mesenteric cyst.

Clinically it is difficult to distinguish a paraovarian cyst from an ovarian mass. Therefore imaging is frequently used to reveal the diagnosis. Clinically detectable paraovarian cysts are often seen in reproductive-age women typically as a simple cystic mass on ultrasonography.⁷ Sonographic findings of paraovarian cystadenomas usually show cystic masses containing one or more

small solid nodules and occasionally contain septations.⁵ Besides this, sonographic diagnosis of such cysts is not always feasible and requires greater awareness and accuracy.⁸ Most patients (76%) with paraovarian cysts have a separate ipsilateral ovary which is seen by ultrasonography.⁹ However, some studies suggest that paraovarian and paratubal cysts are difficult to diagnose before surgery with the use of transabdominal and transvaginal sonography.¹⁰ In addition cystic ovarian masses may be impossible to differentiate sonographically from mesenteric cysts.¹¹ Our patient underwent routine ultrasonographic examination of the abdomen, which revealed a mesenteric cyst sized 11 cm x 8 cm x 4 cm, with bilaterally normal ovaries and fallopian tube and a normal uterus. The case thus presented us with a unique diagnostic dilemma as both clinically and radiologically it eluded the diagnosis of paraovarian or ovarian mass.

Paraovarian cysts generally being asymptomatic and benign seldom require treatment except in case of complications.⁵ Both open surgery and laparoscopy have been advocated.⁸ In our case, since the diagnosis of mesenteric cyst was made preoperatively, the patient underwent an exploratory laparotomy upon which the final diagnosis was established.

Paraovarian cysts mostly originate from the mesothelium covering the peritoneum (68%) and are lined with flattened epithelium.³ They may also arise from paramesonephric (Mullerian) remnants (30%) and mesonephric (Wolffian) remnants (2%).² Cysts which originate from paramesonephric remnants are lined with secretory, ciliated columnar or cuboidal epithelium. Mesonephric type cysts on the other hand are lined with cuboidal or flattened epithelium.¹²

Paraovarian cysts are not always benign and different types of neoplasms can be found in broad ligament region with the percentage of neoplasms in these cysts which is approximately 2%. Serous cystadenomas, serous adenofibromas, papillary serous malignancy and cystadenocarcinoma are pathological diagnosis.³ In the present case the histopathologic report revealed the tumour to be a benign serous cystadenoma. Follow-up showed her to be symptom and disease free at six months.

Paraovarian cysts may thus uncommonly mimic mesenteric or omental cysts and should be kept in mind in the differential diagnosis while evaluating a young female of reproductive age group presenting with lump in abdomen. Although the diagnosis may be established preoperatively by ultrasonography, surgery and subsequent histopathology gives the definitive diagnosis.

References

1. Alpern MB, Sandler MA, Madrazo BL. Sonographic features of parovarian cysts and their complications. *AJR* 1984; 143 : 157-60.
2. Genadry R, Parmley T, Woodruff JD. The origin and clinical behavior of the parovarian tumor. *Am J Obstet Gynecol* 1977; 129 : 873-80.
3. Vlahakis-Miliaras E, Miliaras D, Koutsoumis G, Miliaras S, Spyridakis I, Papadopoulos MS. Paratubal cysts in young females as an incidental finding in laparotomies performed for right lower quadrant abdominal pain. *Pediatr Surg Int* 1998; 13 : 141-2.
4. Varras M, Akrivis Ch, Polyzos D, Frakala S, Samara Ch. A voluminous twisted paraovarian cyst in a 74-year-old patient: case report and review of the literature. *Clin Exp Obstet Gynecol* 2003; 30: 253-6.
5. Korbin CD, Brown DL, Welch WR. Paraovarian cystadenomas and cystadenofibromas: sonographic characteristics in 14 cases. *Radiology* 1998; 208: 459-2.
6. Minor TX, Yeh BM, Horvai AE, Abrahams HM, Meng MV, Stoller ML. Symptomatic Perirenal Serous Cysts of Mullerian Origin Mimicking Renal Cysts on CT. *AJR* 2004; 183: 1393-6.
7. Herbert CM 3rd, Segars JH, Hill GA. A laparoscopic method for excision of large retroperitoneal paraovarian cysts. *Obstet Gynecol* 1990; 75 : 139-41.
8. Darwish AM, Amin AF, Mohammad SA. Laparoscopic management of paratubal and paraovarian cysts. *JSLs* 2003; 7 : 101-6.
9. Kim JS, Woo SK, Suh SJ, Morettin LB. Sonographic diagnosis of parovarian cysts: value of detecting a separate ipsilateral ovary. *AJR* 1995; 164 : 1441-4.
10. Barloon TJ, Brown BP, Abu-Yousef MM, Warnock NG: *J Clin Ultrasound* 1996; 24(3) : 117-22.
11. Mittlestadt C: Ultrasonic diagnosis of omental cysts. *Radiology* 1975; 117 : 673-6.
12. Stenbäck F, Kauppila A: Development and classification of parovarian cysts. An ultrastructural study. *Gynecol Obstet Invest* 1981; 12 : 1-10.

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Genotyping SLCO1B1 variants may be helpful for tailoring the dosage of statins and safety monitoring.

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