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Case Report

An unusual presentation of paraovarian cyst

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Abstract

Paraovarian cysts (POC) are benign tumors arising from adnexa occurring in women of reproductive age group. POC's may be found at surgery or during an imaging examination that is performed for another reason. They are usually small and asymptomatic, large cysts as large as 20cms or more in diameter present to Emergency Department with acute abdomen. But our patient though was carrying tumor corresponding to 22 wks gravid uterus size was asymptomatic. As diagnosis of POC was not made pre operatively both clinically and radiologically, patient was taken for exploratory laparotomy. Histopathology proved to be mullerian duct cyst.

Key words: Abdomino pelvic cyst, Mullerian duct cyst, Paraovarian cyst.

Introduction

Paraovarian cysts (POC) represent approximately 10-20% of adnexal masses(1). They occur in women of all age groups, more common in women aged 30-40 years. Most of the time they are small and asymptomatic, although are occasionally large, resulting in pelvic pain(2). A study in Italy has estimated their incidence to be about 3%. They are thin walled and unilocular, hence pose difficulty in differentiating it from ovarian cyst on imaging. There are no case reports of Mullerian duct cyst in females in literature. Hence we are presenting a case report which presented unusually.

Case History

A 23 years old nulliparous lady with a married life of 8 months presented with h/o 4 months amenorrhoea and Lower abdominal distension of 4 months duration. Her previous cycles were regular. She presented to us with Urine pregnancy test–negative (done in a private hospital) for evaluation of abdominal distension.

On examination, patient was well built and nourished with no pallor, pre operative weight of 76 kgs with height of 159 cm and BMI of 36.3 kg/meter (2). Hirsutism was present. On palpation mass arising from pelvis corresponded to 22weeks gravid uterus size and clinically measured 24x22 cms. It had cystic consistency, smooth surface, with horizontal mobility. On per vaginal examination Uterine not separately felt, all forniceal fullness present. Rectal examination revealed that the rectal mucosa and parametrium was free of nodularity or induration. Impression: Ovarian tumor or benign or malignant.

On clinical Investigations the levels of Haemoglobin-12.6gms%, urine routine & culture, RFT and LFT- normal, Thyroid are found to be normal, OGTT Fasting 60mgs%, 1hr 215mgs%, 2hr 275mgs%. Tumor markers CA 125 and AFP are found to be normal except LDH-409U/L which was elevated. Abdominopelvic Ultrasound: Uterus 7.2x2.9x4.8cms.

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ET 10 mm. A large simple cystic lesion noted in midline measuring 1219 cc in volume & size 19.8x10.7x 11.5 cms abutting both the ovaries. Impression: Fatty liver grade I, Large abdomino pelvic cystic mass, likely of ovarian origin.

After obtaining fitness for surgery, she was posted for exploratory laparotomy Abdomen is opened through Maylard's incision. On Per operative findings Right sided paraovarian cyst of 21 x 18 cms with clear contents was noted (fig 1). Right tube elongated & stretched over the cyst .The cyst was removed intact & sent for frozen section. Bilateral ovaries were enlarged with multiple small follicles suggestive of PCOD (Fig 2).Uterus was normal in size. Peritoneal washings were taken and sent for cytology. Omental biopsy and peritoneal biopsy were taken.

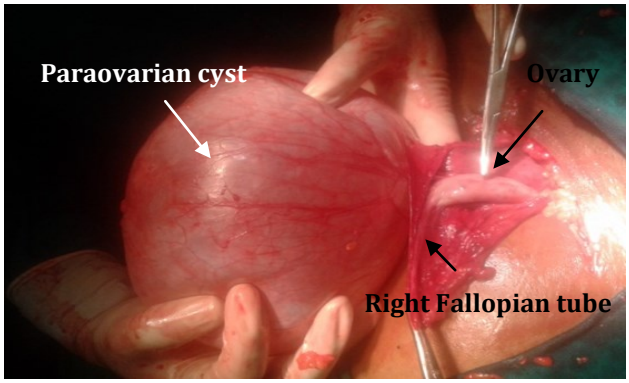

Fig:1 – Pre operative paraovarian cyst of right side with tube

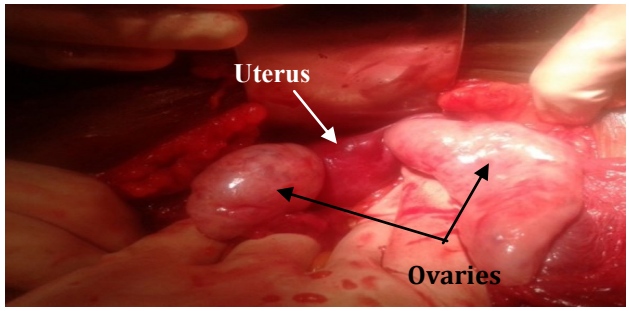

Fig:2 – Uterus and bilateral ovaries after removing the cyst

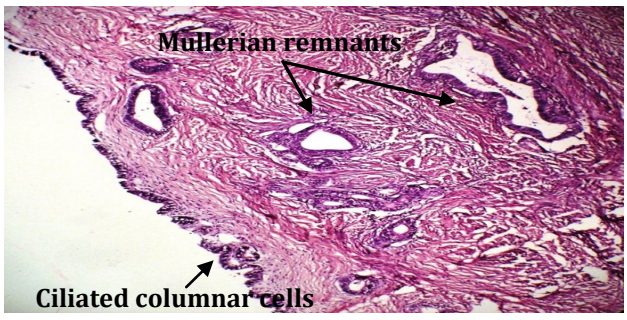

Fig:3 – Cyst wall lined by ciliated columnar cells shows fibrocollagenous tissue with fragments of smooth muscle cells and mullerian remnants along with blood vessels and chronic inflammatory cells.

A per Frozen Section report: Site of origin: Right Paraovarian tissue, Gross: Unilocular cyst of 21x18x6 cms, About 5 liters of clear fluid was drained, Inner surface was smooth, Microscopy: Frozen section shows cyst wall lined by cuboidal epithelium showing at places hobnail appearance. The subepithelium shows stroma composed of fibrous tissue. Impression: Simple mesothilial cyst and Postoperative period was uneventful.

On Histopathological examination: Peritoneal washings –negative for malignant cells, Omental biopsy and Peritoneal biopsy-No significant pathology. Microscopy: Section from cyst wall shows fibrocollagenous tissue with fragments of smooth muscle cells along with congested blood vessels & chronic inflammatory cells. Cyst is lined by ciliated columnar cell. Impression : Consistent with Mullerian dust cyst (Right side) as shown in (Fig 3).

Discussion

Paraovarian cysts mostly originate from the mesothelium covering the peritoneum(68%) and are lined with flattened epithelium[1,3]. They may also arise from paramesonephric (Mullerian) remnants (30%)and mesonephric (Wolffian) remnants (2%) [3].Cysts which originate from paramesonephric remnants are lined with secretory, ciliated columnar or cuboidal epithelium and are usually benign.

Paraovarian cysts can be seen at any age but are most commonly encountered in the third and fourth decades. In spite of causing rare symptoms, complications due to torsion, internal haemorrhage and rupture massive sizes are seen[5]. Cysts of Mullerian origin occurring separate from the ovaries and fallopian tubes are rare. Paraovarian and paratubal cysts are usually found in the mesosalpinx between the ovary and fallopian tube. These adnexal cysts may be classified as paratubal or paraovarian depending on their proximity to either the tube or the ovary[4]. Most adnexal cysts are presumed to arise from the ovary and are misdiagnosed as such and the definitive diagnosis of paraovarian cysts or paratubal cysts are commonly made at the time of surgery[2].

Clinically it is difficult to distinguish a paraovarian cyst from an ovarian cyst. Therefore imaging is frequently used to reveal the diagnosis. Besides this, sonographic diagnosis of such cysts is not always possible as it requires awareness and experience. Most patients (76%) with paraovarian cysts have a separate ipsilateral ovary which is seen by ultra sonography. However as per some studies paraovarian and paratubal cysts are difficult to diagnose before surgery with the use of transabdominal and

transvaginal sonography as they may display follicle cysts, and suspicious findings (septations, papillations and solid components) because of close proximity to ovary[6]. On CT, most paraovarian cysts are unilocular, thin walled, and anechoic. Uncommonly, the cysts may show internal echoes and thin septations. Rarely, features suggestive of malignant changes such as papillary projections, mural nodules, or thick internal septations may be seen. Visualization of a normal ipsilateral ovary close to but separate from the adnexal cyst is an important MR finding.

Paraovarian cysts are rarely diagnosed by radiologists[2]. They should be considered in the differential diagnosis of acute abdomen in females. Paraovarian cysts are usually single, but bilateral lesions have been reported. Torsion of paraovarian cysts are usually seen in the reproductive age group especially in women having tubal ligation by Pomeroy method[8]. Paraovarian cysts are generally benign rarely they can be borderline or malignant. Both open surgery and laparoscopy have been advocated. [7]. In our case as diagnosis was not made pre operatively open surgery was undertaken. Elevated LDH in our case could be due to other cause.

Conclusion

When a sonographic/CT study shows the ovary close to a pelvic cyst, paraovarian cyst should be one of the first diagnostic choices. Physicians should maintain a high index of suspicion for this uncommon cyst which is often difficult to diagnose both clinically and radiologically.

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