



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

CYSTIC SURPRISE – A RARE CASE OF PARAOVARIAN CYST IN POST HYSTERECTOMIZED WOMEN ADHERENT TO ANTERIOR ABDOMINAL WALL

KEY WORDS: Paraovarian Cyst, Adhesions, Mri Intervention

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ABSTRACT

Background: Para ovarian cysts (POCs) consist of 10% of adnexal masses approximately [1]. These are more prevalent among women in 30-40 years of age. A simple cyst can suffer multiple transformations, resulting in a neoplastic paraovarian cyst, that is usually benign, or in a serous cyst similar to benign ovarian tumour. It can be challenging to distinguish between ovarian cyst and Para ovarian cyst using imaging, these cysts are frequently found intraoperatively during laparotomy. Whereas, diagnosing adnexal masses or neoplasms with magnetic resonance imaging (MRI) has proven beneficial. Increased knowledge of the MRI features associated with POCs could result in MRI playing a significant role in avoiding surgery by offering a non-invasive diagnosis. Hence, this report highlights a rare case of Para ovarian cyst in post hysterectomized women along with its diagnostic procedures and management **Case Report:** A 38 years old female presented to emergency unit with complaints of pain in lower abdomen since 6-8months. She was hysterectomized 2 years back The obstetric history consisted of two live births, and tubal ligation. CECT Abdomen and pelvis - large septated cystic mass of size 8 *7 cms in right adnexal region extending to right iliac fossa – Right ovarian complex mass. Omental adhesions were present. Laparoscopy revealed a large paraovarian cyst of ~ 8m * 7 cm in size which was twisted around infundibulopelvic ligament on Right side. Right fallopian tube was oedematous and overstretched over it. Right ovary was bulky which was adhered to anterior abdominal wall with adhesions. **Conclusion:** Paraovarian cysts should be kept in mind as a differential diagnosis for patients with adnexal masses both by gynaecologists and radiologists. The importance of differentiating paraovarian cyst from ovarian cyst cannot be overemphasized. The role of expectant management in paraovarian cyst needs to be studied. Laparoscopic approach is feasible in all cases.

INTRODUCTION

Para ovarian cysts (POCs) consist of 10% of adnexal masses approximately [1]. These are more prevalent among women in 30-40 years of age [2] Para ovarian cysts are unilocular, thin-walled sac filled with fluid and typically originate in the broad ligament. They are not connected to ovary. Whereas, ovarian serous cystadenomas can have similarities with multilocular cysts. It is often unilateral and benign, and it is situated at the ligament that connects the uterus and the ovary [3]. Paraovarian simple cyst originates from the embryologic remnants of the urogenital system (mesonephric or Wolffian and paramesonephric or Mullerian ducts) [4]. In embryonic life, mesonephric and paramesonephric ducts are characteristic for both sexes. In female embryos, paramesonephric ducts rise to the main genital organs. It is possible that some portions from the cranial and caudal segments of the excretory tubules to persist in the female fetus in the mesovarium, forming the epoophoron and par oophoron. The mesonephric duct disappears, except for one small cranial segment located at the epoophoron level, and sometimes except for one small caudal segment that may remain in the uterus or the vaginal wall. A paraovarian cyst may be formed from these structures during the lifetime [5]. Another origin can be represented by the mesothelium, resulted from the invagination of the tube's serosa. A simple cyst can suffer multiple transformations, resulting in a neoplastic paraovarian cyst, that is usually benign, or in a serous cyst similar to benign ovarian tumor (cystadenomas or cyst adenofibromas) [5]. It can be challenging to distinguish between ovarian cyst and Para ovarian cyst using imaging, these cysts are frequently found intraoperatively during laparotomy. Whereas, diagnosing adnexal masses or neoplasms with magnetic resonance imaging (MRI) has proven beneficial. Increased knowledge of the MRI features associated with POCs could result in MRI playing a significant role in avoiding surgery by offering a non-invasive diagnosis [2]. Hence, this report highlights a rare case of Para ovarian cyst in post hysterectomized women along with its diagnostic procedures and management.

Case Report

A 38 years old female presented to emergency unit with complaints of pain in lower abdomen since 6-8months. Pain was more in right iliac fossa with insidious in onset, non-radiating and with no relieving factor. There was no diarrhoea, constipation, urinary problems, fever or any other medical illness. She was hysterectomized 2 years back

The obstetric history consisted of two live births, and tubal ligation. On general examination the patient was conscious, pulse rate- 102/minute, temperature was normal, BP-120/80 mm of Hg, cardiovascular and respiratory system were normal. On pelvic exam, a smooth, round, rubbery mass, non-adherent to the surrounding tissues and no vaginal bleeding was found. Laboratory tests and tumor markers were within normal limit. Abdominal ultrasound scan showed 84* 44*63 mm tubular cystic lesion in right iliac fossa with few partial internal septations separated from right ovary. CECT Abdomen and pelvis - large septated cystic mass of size 8 *7 cms in right adnexal region extending to right iliac fossa – Right ovarian complex mass.

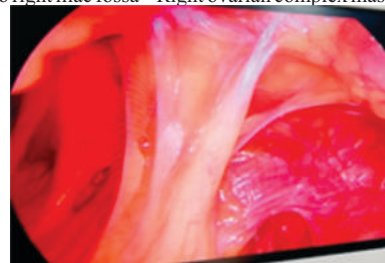


Figure 1- Omental Adhesions.

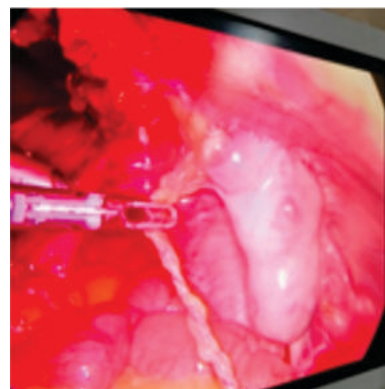


Figure 2- Ovary Adhered To Anterior Abdominal Wall.

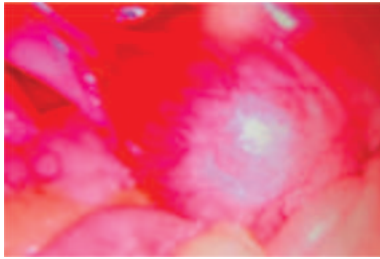


Figure 3- Paraovarian Cyst Adhered To Wall.

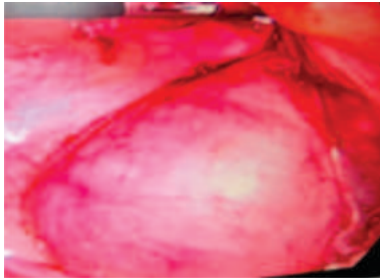


Figure 4- Cyst Enucleation

Elective Laparoscopy was done. Omental adhesions were present. (Fig 1) Laparoscopy revealed a large paraovarian cyst of ~8m * 7 cm in size which was twisted around infundibulopelvic ligament on Right side. Right fallopian tube was oedematous and overstretched over it. Right ovary was bulky which was adhered to anterior abdominal wall with adhesions (Fig. 2) On left side, ovaries and tubes was not visualized. Paraovarian cyst was enucleated from the cyst wall and fluid were aspirated. Right salpingectomy was also done. Cyst and cyst wall was removed with mini laparotomy. Peritoneal lavage was done. Post-operative period was uneventful. Histopathological report showed paraovarian cyst wall with

DISCUSSION

In the present case, the patient reported symptoms of abdominal pain with localized tenderness for which clinical examination reported the possibility of adnexal mass. The diagnosis performed for the present case was found to be challenging as the tumor biomarkers were within the normal range but the imaging studies reported the presence of cystic lesions. Therefore, to confirm the diagnosis exploratory laparotomy as a part of surgical intervention and diagnosis was performed along with histopathological investigations. While determining the differential diagnosis of acute abdomen in women, POCs must be considered [6].

POCs can display a variety of sonographic characteristics. Sonographically, they are often unilocular cysts with thin walls and smooth margins. If transvaginal sonography reveals no papillary projections, their risk of malignancy is minimal. However, pathological testing may reveal a borderline tumor if mural proliferations are present. Whereas, for preoperative diagnosis, MRI can be useful [7]. Torsion (2-16%), haemorrhage, rupture, and secondary infection are among the complications associated with POCs. Neoplastic transformation (2.9%) includes endometrioid cystadenocarcinoma, mucinous cystadenocarcinoma, papillary serous cystadenoma, and serous cystadenocarcinoma [8].

More than half of POCs is misdiagnosed as ovarian cysts, tubal cysts, peritoneal inclusion cysts and even mesenteric cysts [1]. Laparoscopy is the preferred approach, Intraoperative diagnosis of paraovarian cyst is done by its location and in difficult situations like dense adhesions identification is by the characteristic crossing of vessels over the surface of the cyst. Laparoscopic paraovarian cystectomy is technically easy and less time-consuming than the ovarian cyst and is feasible in almost all cases. The presence of adnexal torsion in paraovarian cyst should not deter one from doing detorsion and paraovarian cystectomy with adnexal preservation to ensure future fertility and gonadal function [9] Age, menopausal status, clinical presentation, cyst size, septation and CA 125 are poor index of neoplasm. Hence, they are not useful in differentiating a simple paraovarian cyst from neoplasm. So, in the presence of papillary projection, caution should be taken at the time of surgery with the use of Endo bag to prevent intraperitoneal spillage and frozen section

analysis [10]. Benign paraovarian tumours are managed by paraovarian cystectomy.

CONCLUSION

Optimal management of an adnexal mass depends on the knowledge of the origin and the exact nature of the mass. Paraovarian cysts should be kept in mind as a differential diagnosis for patients with adnexal masses both by gynaecologists and radiologists. The importance of differentiating paraovarian cyst from ovarian cyst cannot be overemphasized. The role of expectant management in paraovarian cyst needs to be studied. Laparoscopic approach is feasible in all cases.

Ethical Approval

Ethical clearance not taken since it is a single case report. Patient consent obtained.

Conflict Of Interest None

Informed Consent Informed consent was obtained from the subject involved.

REFERENCES

1. Barloon TJ, Brown BP, Abu-Yousef MM, Warnock NG: Paraovarian and paratubal cysts: preoperative diagnosis using transabdominal and transvaginal sonography. *J Clin Ultrasound*. 1996, [https://doi.org/10.1002/\(SICI\)1097-0096\(199603\)24:3<117::AID-JCU2>3.0.CO;2-K](https://doi.org/10.1002/(SICI)1097-0096(199603)24:3<117::AID-JCU2>3.0.CO;2-K)Citations: 53
2. Kishimoto K, Ito K, Awaya H, Matsunaga N, Outwater EK, Siegelman ES: Paraovarian cyst: MR imaging features. *Abdom Imaging*. 2002, DOI<https://doi.org/10.1007/s00261-002-0014-6>
3. Gopal K, Lim Y, Dobson M, Keating P, Stringfellow H: A case of torted parafimbrial cyst on MRI: case report and review of the literature. *Br J Radiol*. 2006, <https://doi.org/10.1259/bjr/23068987>
4. Sadler TW et al. *Medical Embryology*. 10th ed, 2007, 225-240.
5. Suzuki S, Furukawa H, Kyozuka H et al. Two cases of paraovarian tumor of borderline malignancy. *J Obstet Gynaecol Res*. 2013; 39:437–441.
6. Rijal P, Pokharel H, Chhetri S, Pradhan T, Agrawal A: Bilateral huge fimbrial cysts with torsion of right fallopian tube. *Health Renaissance*. 2012,
7. Syed S, Amin A, Ullah M: Fallopian tube torsion secondary to paraovarian fimbrial cyst: a difficult to diagnose and a rare cause of acute abdomen in adolescent. *Cureus*. 2021, DOI: 10.7759/cureus.17888
8. Durairaj A, Gandhiraman K: Complications and management of paraovarian cyst: a retrospective analysis . *J Obstet Gynaecol India*. 2019, <https://doi.org/10.1007/s13224-018-1152-2>
9. Agarwal P, Agarwal P, Bagdi R, et al. Ovarian preservation in children for adnexal pathology, current trends in laparoscopic management and our experience. *J Indian Assoc Pediatr Surg*. 2014;19(2):65–9.
10. Smorgick N, Herman A, Schneider D, et al. Paraovarian cysts of neoplastic origin are underreported. *JSLs*. 2009;13(1):22–6.