



LAPAROSCOPIC CYSTECTOMY FOR HUGE PARAOVARIAN CYST IN A YOUNG GIRL

Obstetrics & Gynaecology

Dr. Krupa Shah

Department of Obstetrics and Gynaecology, Melaka Manipal Medical College, Manipal, 576 104, Karnataka State, India.

ABSTRACT

Background: A cyst in abdomen is one of the known problem in young girls, but huge paraovarian cyst is very rare. Here, we report a case of giant cyst in a young girl who presented with acute abdomen. **Case:** A-21-year girl presented to causality with complaints of vomiting and acute right abdominal pain. Her vitals were stable except tachycardia. Her ultrasound revealed large cystic lesion in the abdomen and MRI suggested diagnostic dilemma, but reported as possible ovarian cyst. A challenging laparoscopic cystectomy of para-ovarian cyst was carried out with quick and uneventful recovery. **Summary:** The diagnostic challenge is to identify preoperatively the site of origin for huge abdominal cyst. Pure laparoscopic management for huge abdominal cyst is feasible once benign nature of mass is confirmed by imaging modality and tumor markers.

KEYWORDS

Adnexal cyst, Laparoscopy, Cystectomy, Para-ovarian cyst, Young girl

INTRODUCTION:

Huge cyst have become uncommon due to increasing awareness in the women and advances in imaging. However, post-menarchal, adolescents and young girls are vulnerable population for the late detection and development of large cyst. This is because of its asymptomatic behavior. Only after it produces pressure effect due to massive enlargement, it gets attention. There could be symptoms like bloating, nausea, vomiting, abdominal heaviness or pain¹. Occasionally menstrual irregularity could be present if the cyst is originating from ovaries.

The cyst can have origin from ovaries, paraovarian tissue, mesenteric or from retro-peritoneal structure and peritoneum². It is challenging sometimes to identify the exact organ/site of origin even with MRI or CT scan due to massive size. Here, we describe a case of giant para-ovarian cyst managed completely through laparoscopy in a young girl.

Case: A 21 year, young girl, presented with complain of severe abdominal pain for 2-3 hours to causality. She had vomiting twice. Her history suggested oligomenorrhoea for past 8 months. Abdominal examination suggested tenderness in upper right abdomen and vague fullness in the abdomen and in flanks. She had uneventful past and family history. She was 86 kg and 164 cm in height, her BMI was 32, hence on physical examination, correct delineation of mass was not possible. Her vitals were stable, except mild tachycardia and injectable analgesic allowed relief of the pain.

Investigations:

Her abdominal ultrasound suggested large anechoic, thin wall cyst occupying whole abdomen, diagnosis of huge ovarian cyst was kept. MRI suggested large cystic lesion arising from pelvis measuring 30x20x7.5 cm, without solid component or papillary projection and septations (Figure 1a, 1b, 1c). The mass was extending to paracolic spaces and epigastrium, most probably of left ovarian origin, ORADS 2 (ovarian and adnexal reporting data system). Thus, benign nature of mass was confirmed MRI and tumor markers. (CA 125, CA 19-9 were within normal limits). Her preoperative assessment was unremarkable.

Treatment:

Excision of the abdominal/ovarian cyst was decided through minimally invasive surgery. Abdominal access was through supra-umbilical incision, under general anesthesia. The cyst found was glistening white and was occupying whole abdomen and pelvis, appearing benign huge cyst. Two accessory ports were introduced and cyst was punctured under laparoscopic guidance through accessory port. Almost 3.5 liters of straw color fluid was drained through suction apparatus. After partial drainage of cyst fluid, the normal ovaries were identified bilaterally. Hence, origin was confirmed as para-ovarian cyst. Complete paraovarian cystectomy was carried out and cyst wall was retrieved through 10 mm supra-umbilical port incision. The operation was lasted for an hour. Post-operative period was uneventful and patient was discharged after 48 hours. Histopathology report suggested flattened and ciliated columnar epithelium cyst wall with fibro-collagenous stroma, suggestive of serous cyst adenoma. She was doing well after 1.5 and 3 months following surgery.

DISCUSSION:

Huge abdominal cysts are very rare. It can arise from ovary, para-ovarian tissue, omentum, mesentery and from retroperitoneal tissues usually. Other cysts found in abdomen are hydatid cyst, peritoneal inclusion cyst, and loculated ascites etc³.

Majority of the ovarian and paraovarian cysts are slow growing and benign, hence, remain unrecognized for a long time until symptoms develops. Many a times, cysts are accidentally diagnosed. Common presenting symptoms are nausea, vomiting, bloating due to mass effect and menstrual irregularity, dysmenorrhea in case of ovarian involvement. Depending on the site and size of cyst, complications can occur eg. hydronephrosis in retroperitoneal cyst and bowel obstruction with omental/mesenteric cyst. The cyst can undergo complications like perforation, rupture, hemorrhage and torsion. We could not notice torsion in our case, so we attribute gastrointestinal symptoms to large size of cyst. Spontaneous rupture may be associated with hemorrhage and shock immediately, and development of dense adhesions eventually due to granulomatous reaction in few cases⁴.

We happened to deal with paraovarian cyst. The Paraovarian cysts are usually found adjacent to the ovary and the fallopian tube. Likewise, any other cyst, paraovarian cysts can be benign, borderline or malignant⁵. The histologic types are mesonephric, mesothelial, and paramesonephric origins. The most frequently reported is paramesonephric type⁶. In our case, the giant paraovarian cyst(PC) was located adjacent to normal ovaries and tube was stretched over the cyst. Incidence of PC is noted between 5-20% in the literature among adnexal cyst⁷. However, Large size (>10cm) paraovarian cysts are unusual and anecdotal in literature. It is found more commonly in 3rd and 4th decade than in adolescents and young girls⁸.

Imaging techniques like ultrasound and MRI have an important role in delineating a mass in abdomen, and to identify precisely origin of mass. It helps in differentiating benign cysts from malignant one, hence in preoperative planning. Though, MRI superior to ultrasound, the report can misguide and confuse sometimes, especially in regards to site of origin, which had happened in our case. Tumor markers are essential part of investigating large abdominal cyst, which helps to differentiate benign, borderline and malignant mass.

Treatment modalities include laparoscopy and laparotomy. Aspiration of cyst preoperative under ultrasound guidance can produce complications like infection and bleeding. Hence, it should be avoided which would also prevent accidental spillage of malignant cells². Resection of cyst is the recommended treatment due to risk of malignancy and mass effect. Excision of the cyst is either through laparoscopy or laparotomy. Laparoscopic excision may be considered as gold standard for benign masses, due to its benefits of less pain, small incision and speedy recovery. It was a challenging case as the cyst was occupying whole abdomen from pelvis to liver and until decompression we couldn't decide the organ of origin. Decompression of the cyst at laparoscopy and laparotomy is advisable for simple/benign cyst. There is no consensus on size limit of cyst for laparoscopic approach⁴, it solely depends on the operator's experience. Laparoscopic approach results in less chances of adhesion and hence,

chronic pain and fertility problems in future⁹.

CONCLUSION:

Giant paraovarian cyst are rare in adults. As majority of cyst are slow growing, symptoms appear late. Acute abdomen is the most common symptom. The preoperative diagnosis is extremely difficult in spite of appropriate imaging modalities. Laparoscopic excision is the gold standard management for young adults in benign cases.

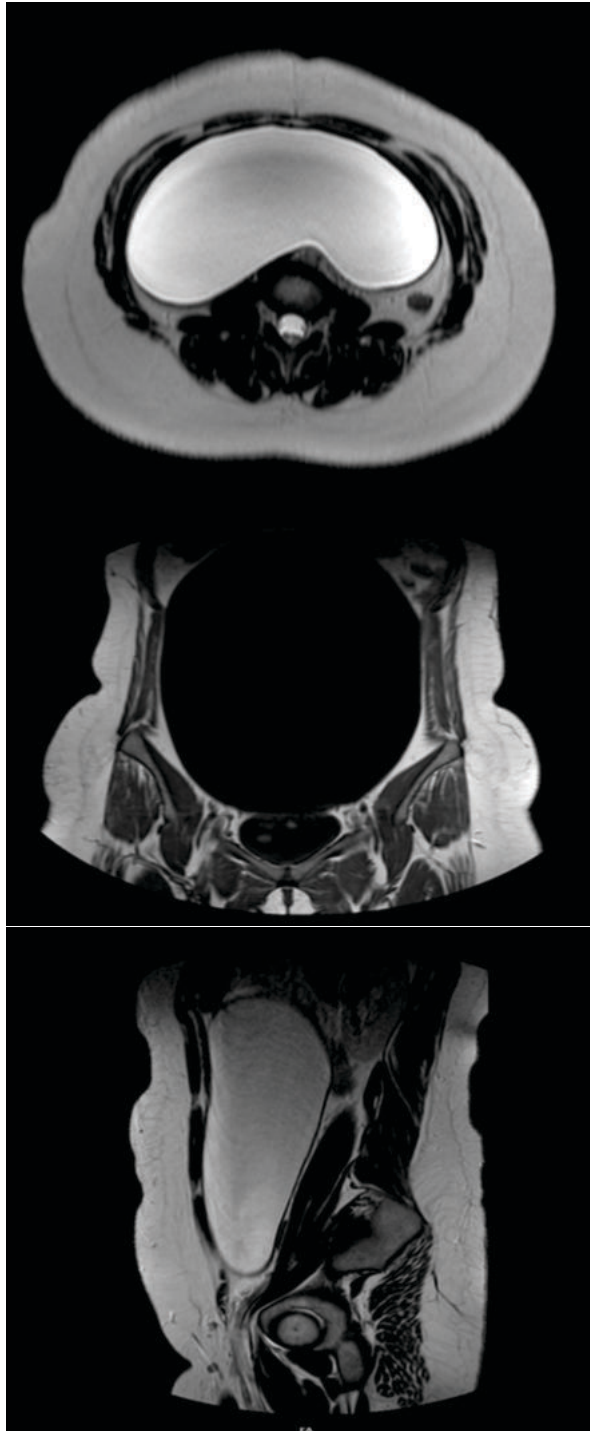


Figure 1
A) Axial, B) coronal and C) sagittal image of MRI depicting paraovarian cyst

REFERENCES

1. Bolukbas FF, Bolukbas C, Furuncuoglu Y, et al. Large abdominal cystic masses: Report of seven cases. *J Pak Med Assoc* 2016;66:226-8
2. Yeika EV, Efie DT, Tolefac PN, et al. Giant ovarian cyst masquerading as a massive ascites: a case report. *BMC Res Notes* 2017;10:749
3. Nguyen M, Faul P, Naqvi SA. Giant Mesenteric Cyst - Cause of Abdominal Distension Managed with Laparotomy-A Case Report. *J Case Rep Stud* 2014;2: 303
4. Ng ZQ, Pradhan S, Wijesuriya R. Dilemma of the giant abdominal cyst. *BMJ Case Rep* 2019;12:e227255. doi:10.1136/bcr-2018-227255
5. Genadry R, Parmley T, Woodruff JD. The origin and clinical behaviour of the paraovarian tumor. *Am J Obstet Gynecol* 1977;129:873-80.
6. Samaha M, Woodruff JD. Paratubal cysts: frequency, histogenesis, and associated clinical features. *Obstet Gynecol* 1985;65:691-4.
7. Savelli L, Ghi T, De Iaco P, Ceccaroni M, Venturoli S, Cacciatore B. Paraovarian/paratubal cysts: comparison of transvaginal sonographic and pathological findings to establish diagnostic criteria. *Ultrasound Obstet Gynecol*. 2006 Sep;28(3):330-4. doi: 10.1002/uog.2829. PMID: 16823765.
8. Felipe JHJy, Alcantar AR, Franco RF. Adolescent with paraovarian cyst. Surgical treatment. *Cir Cir Engl Ed* 2017;85:535-8
9. Mayer JP, Bettolli M, Kolberg-Schwerdt A, et al. Laparoscopic approach to ovarian mass in children and adolescents: already a standard in therapy. *J Laparoendosc Adv Surg Tech A* 2009;19:S111-5.