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CASE REPORT

# GIANT PARA TUBAL CYST IN AN ADOLESCENT GIRL MIMICKING A MESENTERIC CYST

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***Abstract. Background.*** *Giant para tubal cysts are rare. Preoperative diagnosis poses a challenge. Choice of surgical approach is determined on the basis of morphologic characteristics of the cyst.* ***Case report.*** *A complicated giant para tubal cyst in a 16-year-old girl is presented. Clinical and radiological findings were elusive. Final diagnosis was made intraoperatively. An open approach was chosen for safe and complete removal of the cyst. Uterus and bilateral adnexa were normal.* ***Discussion.*** *The etiopathogenesis, diagnostic challenges and dilemma in selecting the surgical approach is discussed.* ***Conclusion.*** *Clinical and radiological evaluation in giant para tubal cysts may be confusing. Open approach is preferable in view of complete removal of the cyst without rupture.*

***Key words:*** *para tubal, fimbrial cyst management*

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## INTRODUCTION

Para tubal masses are adnexal masses arising from tissues which are either of paramesonephric, mesonephric or mesothelial origin [1]. They constitute 5 to 20% of cystic adnexal lesions. The size of the cyst determines the symptomatology. Complications such as intra-abdominal pressure symptoms, torsion or rupture may supervene [1]. The majority of such cysts are usually mistaken for ovarian masses or at times even for mesenteric cysts. Clinical features and imaging may not conclusively help in ascertaining the diagnosis. Surgical intervention either open or laparoscopic is helpful for both confirmation of diagnosis and treatment. A case of a giant para tubal cyst in a 16-year-old girl is presented to highlight the diagnostic and surgical challenges.

## CASE REPORT

A 16-year-old girl presented with complaints of gradually increasing girth of the abdomen over a period of 9 months. Over the last 2 months she started experiencing lower abdominal discomfort and pain. Pain was dull aching and continuous in nature. There was no history of vomiting. Bowel and bladder habits were unaltered. Physical examination revealed a large cystic mass occupying the entire abdomen simulating ascites.

A contrast enhanced computed tomography (CECT) revealed a giant cystic lesion and was diagnosed as a mesenteric cyst (Figure 1). All blood investigations including CA 125 levels were within normal limits.

In view of the tense abdomen, laparoscopic approach was deferred as passage of the primary trocar and creation of a pneumoperitoneum could prove to be

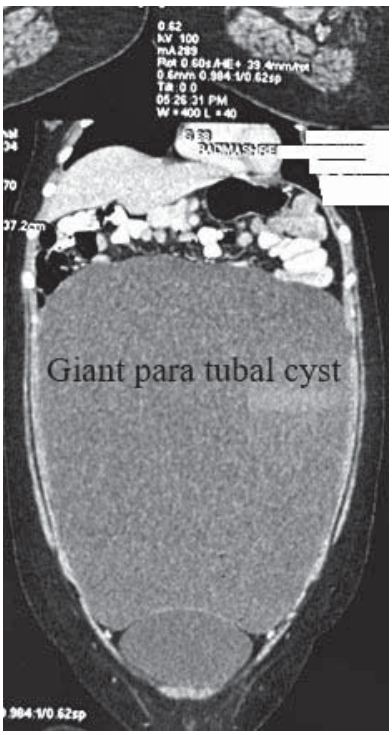


**Fig. 1.** CECT showing a large intraabdominal cyst

not only difficult but hazardous. The peritoneal cavity was opened by a midline incision. A part of the cyst pouted out through the laparotomy incision. The cyst was carefully dissected from the contents of the supracolic compartment and the bowel loops which were completely compressed. The cyst originated from the pelvis and had a pedicle which had undergone torsion (Figure 2).

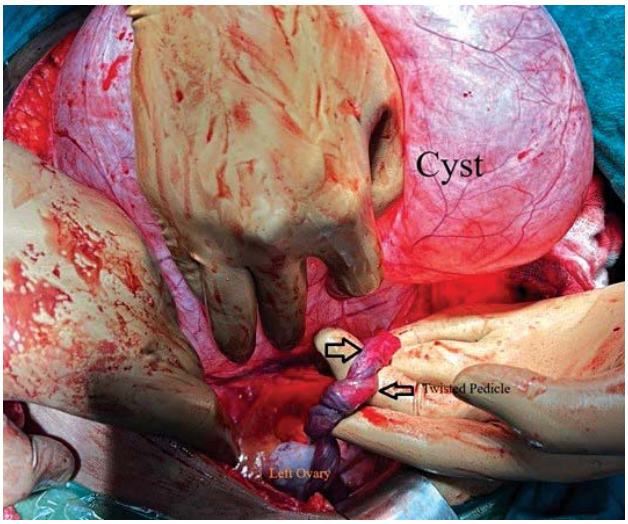


**Fig. 2.** Giant para tubal cyst with twisted pedicle

The pedicle was in juxta position to the fimbrial end of the left fallopian tube. The left ovary was normal. The fimbrial end of the left fallopian tube was carefully separated from the cyst wall. The pedicle was clamped and divided taking utmost care to avoid rupture of the cyst. The uterus, left tube and ovary were normal. The right fallopian tube and right ovary were also normal. The cyst measured approximately 40 x 30 cm and weighed 7.3 kg. (Figure 3). Histopathological assessment of the cyst wall revealed ciliated columnar epithelium with cuboidal epithelium in a few places (Figure 4). Cytological examination did not reveal any malignant cells. The postoperative recovery was uneventful. Patient was discharged on the fifth postoperative day and skin staples were removed on the twelfth postoperative day with complete healing and recovery.

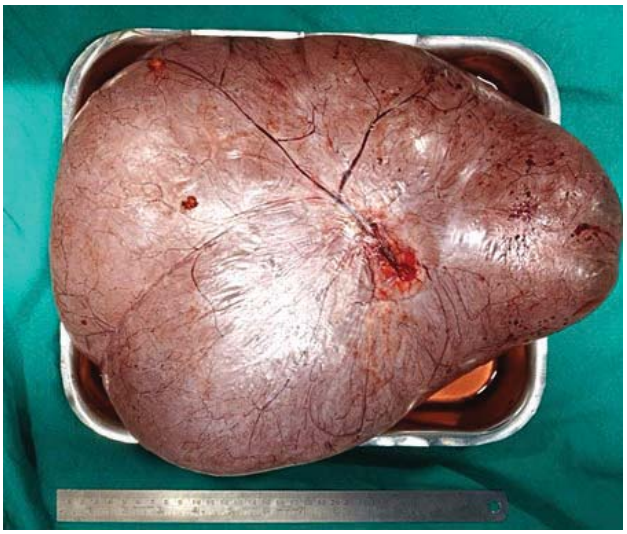

**Fig. 3.** Large dimensions of the cyst

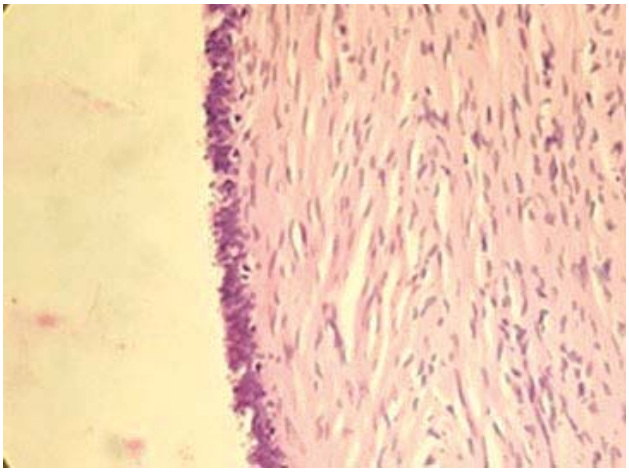

**Fig. 4.** Histopathology of the cyst wall showing ciliated columnar epithelium with cuboidal epithelium in a few places. (magnification 40X, H& E staining)

## DISCUSSION

Para tubal cysts are fluid-filled masses that occur in the mesosalpinx lying within the broad ligament. They vary in size ranging from 1 to 15 cm. Rarely do the

cysts exceed 20 cm [1, 2]. The size of the cyst in the case presented was 40 x 30 cm making it a rare giant para tubal cyst (Figure 3). These cysts originate from paramesonephric (Mullerian) remnants in up to 75% of cases. The rest may originate from mesothelial or rarely mesonephric (Wolffian) tissue. Cysts which originate from paramesonephric remnants are lined with either ciliated columnar or cuboidal epithelium as was observed in the case presented (Figure 4).

Cysts of mesonephric origin are lined by flattened or cuboidal epithelium. It is hypothesized that paramesonephric or mesonephric duct remnants gradually increase in size with increasing hormonal activity giving rise to large para tubal cysts.

The majority of such cysts may be asymptomatic. They become symptomatic with increasing size. As a result, they cause pressure symptoms. Torsion, hemorrhage and rupture are more serious complications. In the case presented the pedicle had undergone torsion. (Figure 2) The onset of abdominal discomfort and pain with increase in size over the last two months can be explained on the basis of the pedicle having undergone torsion. Clinically it is very difficult to ascertain the diagnosis as was experienced in the case presented [3]. Due to the large size with occupation of the entire abdominal cavity, the findings were suggestive of tense ascites. Imaging in the form of ultrasonography (USG), CECT and MRI may be helpful [2, 3, 4]. USG is only suggestive of a fluid filled cyst. The exact origin cannot be ascertained. CECT gives immense information as to the size, origin, pedicle and involvement of other viscera. However, in the case presented the diagnosis on CECT was mesenteric cyst. Hence CECT may be elusive. MRI as a diagnostic radiological modality is preferred for female reproductive pelvic organs [5]. It is claimed to be superior to CECT in diagnosing female reproductive tract lesions. The closest differential diagnosis is ovarian cyst followed by a mesenteric cyst as was reported in the case presented. Hence it is difficult to arrive at a definitive diagnosis preoperatively based on clinical and radiological evaluation. The final diagnosis is determined at laparotomy. Surgical exploration is required to confirm the diagnosis. The choice is between open and laparoscopic approach. For a large cyst laparoscopic approach is not advisable. Difficulty in inserting trocars and creation of a pneumoperitoneum are the main issues. The risk of rupture of the tense cyst is another serious complication that can occur. Laparoscopic approach is preferred for smaller cysts [6]. Hence an open approach is preferable for giant cysts. The intraoperative finding of blood vessels crossing the cyst is pathognomonic of a para tubal cyst [7]. Utmost care needs to be taken to avoid rupture of the cyst. With the pathology yet to be confirmed, this can prove dangerous if the cyst has a malignancy in it. Histopathological examination is extremely important as a low-grade malignancy such as a cystadenoma in the cyst is a possibility. The recurrence rate with a complete excision of the cyst without rupture is negligible [7].

## CONCLUSION

Giant para tubal cyst is an extremely rare condition. Clinical findings and imaging modalities are many times equivocal and inconclusive. An open surgical approach is preferred over laparoscopic approach for a giant cyst. This enables taking utmost care to avoid rupture and confirming the normal anatomical integrity of the female genital organs.

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