

# Autoamputated Fetal Adnexal Torsion Presenting as a Floating Abdominal Mass: Report of Two Cases

Emil Mammadov

Department of Pediatric Surgery, Near East University School of Medicine, Nicosia, Cyprus

An autoamputated fetal adnexal torsion is an extremely rare pathology in newborns that is frequently misdiagnosed as an ovarian cyst. Herein we present two cases of prenatally diagnosed fetal adnexal torsion that were successfully managed by laparoscopy. These cases suggest that this condition can be successfully managed by surgery, even in the neonatal period.

**Keywords:** Fetal adnexal torsion, ovarian cyst, neonatal period, laparoscopy

## INTRODUCTION

Fetal adnexal torsion is a rare medical condition with various presentations. This condition is most commonly diagnosed during prenatal ultrasonography, and it requires a close follow-up due to serious complications such as intestinal obstruction and perforation (1). The treatment protocol is still debatable as there is no consensus between different authors due to the scarcity of cases. The most common approaches are early minimal invasive surgery, percutaneous cyst aspiration, or watchful waiting till spontaneous regression (2-7). All current approaches are debatable due to the lack of prospective randomized trials. Hereby we present two cases that were managed by early surgery in the light of documented literature on this issue.

## CASE PRESENTATIONS

### Case 1

A patient with a prenatally diagnosed intra-abdominal cystic mass was followed up at our department from birth. The cystic mass was 53×39 mm in size with debris inside. During the close radiologic follow-up, the mass changed its position from the left upper quadrant to the left lower quadrant. Its consistency and a cyst wall appearance with continuous displacement during ultrasonography led the radiologist to make a preliminary diagnosis of an enteric duplication cyst. The clinical course was uneventful until 15 days of age, when the patient developed continuous vomiting, restlessness, and abdominal distension. Emergency ultrasound showed an increase in mass size and a small amount of intra-abdominal fluid. Surgery was decided to be performed and the patient underwent diagnostic laparoscopy after providing informed consent. During exploration, a cystic mass attached with a fibrous band to the sigmoid colon was detected (Figure 1). Simultaneously, the right fallopian tube was rudimentary and the right ovary was absent. The left ovary was noted to be normal. The mass was laparoscopically excised (Figure 2). A pathologic examination revealed a complete necrotic cyst wall with no viable tissue inside. The postoperative course was uneventful, and the patient was discharged from the hospital on the next day following the surgery.

### Case 2

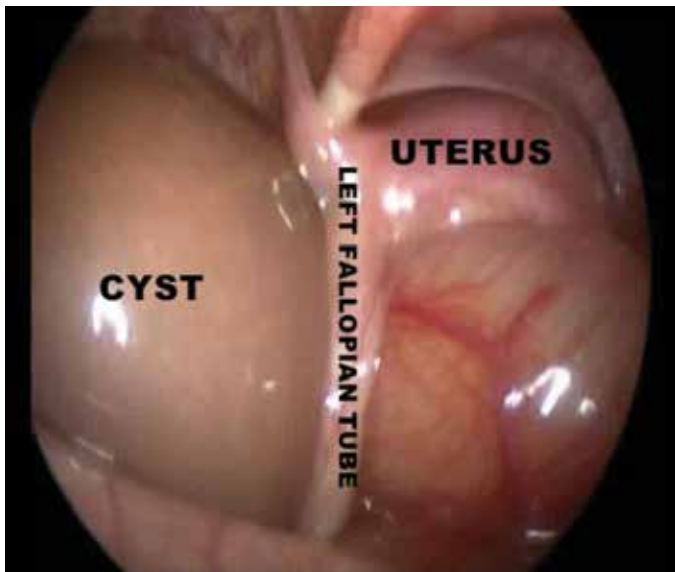
A newborn with a prenatally diagnosed intra-abdominal cystic mass was referred to our hospital. The mass was 50×22 mm in size, with a solid component inside, and was located in the right upper quadrant. During an ultrasound investigation, the mass changed its original position and moved to the pelvis. The left ovary could not be visualized during the radiologic procedure. The patient was conservatively followed up for a month, and elective diagnostic laparoscopy was performed after obtaining informed consent. During exploration, the right ovary and fallopian tube were in place and were confirmed to have a normal morphology. The left ovary and fallopian tube were absent. The left fallopian tube was ending blind with no continuity and fimbrial ending. The cystic mass was discovered lateral to the descending colon and was presumably attached to the remnant of the ovarian ligament with a long thin fibrous band (Figure 3). The mass was excised, and its pathology showed total necrosis with no viable tissue inside the specimen (Figure 4). The postoperative course was unremarkable, and the patient was discharged from the hospital on the day following the surgery.

This study was presented as at the 31<sup>st</sup> National Paediatric Surgery Congress, 30 October-2 November 2013, Eskişehir, Turkey.

**Correspondence Author:** Emil Mammadov  
E-mail: dremilmammadov@gmail.com

**Received:** 06.11.2016  
**Accepted:** 16.12.2016

**Available Online Date:** 06.02.2017



**FIGURE 1.** Necrotic abdominal cyst (adnexal torsion) with its relation to the uterus and contralateral fallopian tube



**FIGURE 4.** The removal of the cyst via an umbilical laparoscopy incision



**FIGURE 2.** The removal of the cyst via an umbilical laparoscopy incision



**FIGURE 5.** The abdomen 6 months following surgery



**FIGURE 3.** Necrotic abdominal cyst floating the abdomen

**DISCUSSION**

Fetal adnexal autoamputation is one of the differential diagnoses among antenatal abdominal cysts in newborns. The etiology of this rare condition is most probably the intrauterine torsion of adnexal structures; however, the mechanism of torsion still remains unclear. Being first described in the 18<sup>th</sup> century during a postmortem study, surgeons paid close attention to its pathology; however, no clear consensus regarding the treatment and follow-up could be made due to scarcity of cases. Common approaches to the management of this condition are watchful waiting, percutaneous aspiration, and surgical removal. The percutaneous aspiration technique for infant ovarian cysts has been proposed by radiologists as a minimally invasive and safe technique. However, the remnant of the cyst wall left in the abdomen still poses a potential threat for intestinal adhesion and volvulus, and cyst recurrence is frequent (8, 9).

Watchful waiting seems to be a reliable approach, particularly in the newborn period. The literature suggests that simple

neonatal ovarian cysts tend to spontaneously regress (6, 9). Frequent ultrasonography follow-up and close monitoring for intestinal obstruction are mandatory in this approach. Complex cysts mostly require surgical intervention. Some authors propose that even autoamputated fetal adnexal torsion cases can be conservatively followed up until spontaneous regression (10).

The surgical approach has been proven to be a safe and reliable option, particularly after the introduction of minimal invasive surgery. Minimal invasive surgery diminishes concerns on postoperative scars and hospitalization duration (7). Laparoscopy in the newborn period with dedicated instruments diminishes the rate of complications related to the procedure itself. In our cases, we did not experience perioperative or postoperative complications. The patients were discharged uneventfully in a very short time.

Our cases support the minimally invasive surgical removal of auto-amputated fetal adnexal torsion in newborns. The procedure is performed in a short time with a short hospitalization duration. Simultaneously, the need for a prolonged follow-up is eliminated with this kind of approach. The cosmetic appearance after surgery is very satisfactory (Figure 5). We think that more cases are needed to form a guideline on the management of this condition.

**Ethics Committee Approval:** N/A.

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## REFERENCES

1. Jeanty C, Frayer EA, Page R, Langenburg S. Neonatal ovarian torsion complicated by intestinal obstruction and perforation, and review of the literature. *J Pediatr Surg* 2010; 45: 5-9. [\[CrossRef\]](#)
2. Mordehai J, Mares AJ, Barki Y, Finaly R, Meizner I. Torsion of uterine adnexa in neonates and children: a report of 20 cases. *J Pediatr Surg* 1991; 26: 1195-9. [\[CrossRef\]](#)
3. Haliloglu M. Amputated ovarian torsion cyst in an infant: ultrasound and CT findings. *CMIG Extra: Cases*. 2004; 28: 47-9. [\[CrossRef\]](#)
4. Sankaran S, Shahid A, Odejinmi F. Autoamputation of the fallopian tube after chronic adnexal torsion. *J Minim Invasive Gynecol* 2009; 16: 219-21. [\[CrossRef\]](#)
5. Koga K, Hiroi H, Osuga Y, Nagai M, Yano T, Taketani Y. Autoamputated adnexa presents as a peritoneal loose body. *Fertil Steril* 2010; 93: 967-8. [\[CrossRef\]](#)
6. Focseneanu MA, Omurtag K, Ratts VS, Merritt DF. The auto-amputated adnexa: a review of findings in a pediatric population. *J Pediatr Adolesc Gynecol* 2013; 26: 305-13. [\[CrossRef\]](#)
7. Zampieri N, Mantovani A, Scirè G, Camoglio FS. Neonatal surgery for giant floating abdominal cysts in females: clinical and surgical management. *J Pediatr Adolesc Gynecol* 2014; 27: 271-3. [\[CrossRef\]](#)
8. Brandt ML, Helmrath MA. Ovarian cysts in infants and children. *Semin Pediatr Surg* 2005; 14: 78-85. [\[CrossRef\]](#)
9. Akin MA, Akin L, Özbek S, Tireli G, Kavuncuoğlu S, Sander S, et al. Fetal-neonatal ovarian cysts--their monitoring and management: retrospective evaluation of 20 cases and review of the literature. *J Clin Res Pediatr Endocrinol* 2010; 2: 28-33. [\[CrossRef\]](#)
10. Trotman GE, Zamora M, Gomez-Lobo V. Non-surgical management of the auto-amputated adnexa in the neonate: a report on two cases. *J Pediatr Adolesc Gynecol* 2014; 27: 107-10. [\[CrossRef\]](#)