Intrauterine left ovarian torsion located in the right abdominal quadrant: Case report

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ABSTRACT

In this article, we will share our case of intrauterine left ovarian torsion located entirely in the right half of the abdomen and its features. She was admitted to the pediatric surgery outpatient clinic due to an intra-abdominal mass lesion. In her history, it was learned that she had a known and unclear diagnosis of an intrauterine mass for seven months. Abdominal magnetic resonance imaging was performed for the cross-sectional evaluation of the lesion. In the right lower quadrant of the abdomen, 35x30 millimeter septated T1 hypointense T2 hyperintense nodular lesion without contrast enhancement and a collection of fluid around the lesion were seen, extending posterior to the cecum and inferiorly to the right adnexal region in the right lower quadrant of the abdomen. The mass was excised by performing salpingoopherectomy. Today, more intrauterine problems can be detected thanks to pregnancy follow-ups and fetal imaging, and intrauterine torsion is one of the fetal pathologies that should be considered. Although the common approach is excision, we think that with the development of early postnatal or fetal surgery opportunities in the future, it will be possible to treat these lesions without causing organ loss.

Keywords: Newborn, ovarian cysts, salpingoopherectomy

INTRODUCTION

Perinatally diagnosed intra-abdominal masses are increasing day by day, due to the widespread use of pregnancy follow-ups (1). Although it is known in the publications that these kits are mostly benign masses, malignant lesions can also be encountered (1). Non-neoplastic intra-abdominal masses are also common intrauterine lesions, and these lesions can also lead to organ or function loss (1).

Intrauterine ovarian torsion, which usually results in organ loss, is rare among neonatal ovarian cysts (2). Due to the small size of the abdomen and the size of the masses, it is sometimes not possible to be diagnosed by imaging methods. Intrauterine ovarian torsion can often be confused with kidney pathologies, duplication cysts and omental cysts (1). In this article, we will share our case of intrauterine left ovarian torsion located entirely in the right half of the abdomen and its features.

CASE

The medical history of the baby was obtained from the 29-year-old mother. According to this information, at the end of 38+6 weeks of first pregnancy in an external center, 2890 grams of girl was born with normal spontaneous vaginal delivery. The baby was Apgar 8/9 and did not need resuscitation after birth. She was discharged after two days of normal maternal side care. On the 10 days, she was admitted to the pediatric surgery outpatient clinic due to an intra-abdominal mass lesion. In her history, it was learned that she had a known and unclear diagnosis of an intrauterine mass for seven months. In fetal ultrasonography, 3.5×3 cm cystic lesion was described, starting from the sub-liver and extending to the Douglas cavity. In the physical examination of the patient, there was a semi-mobile mass lesion that filled almost the entire right abdomen, other system examinations were normal, and vitals were normal. Abdominal ultrasonography was performed on the patient. That showed 51×26 millimeter enlarged layered wall structure with cystic areas of 45×27 millimeters in the right lower quadrant, with a spongioform nodular lesion without blood supply. The continuity of the mass with the intestines could not be determined. 14×8 millimeter normal right ovary was seen behind the mass without calcification. Left ovary could not be visualized. Abdominal magnetic resonance imaging was performed for the cross-sectional evaluation of the lesion. In the right lower quadrant of the abdomen, 35×30 millimeter septated T1 hypointense T2 hyperintense nodular lesion without contrast enhancement and a collection of fluid around the lesion were seen, extending posterior to the cecum.
and inferiorly to the right adnexal region in the right lower quadrant of the abdomen. Considering the age group of the case, it was thought radiologically that the lesion might be compatible with a cystic lesion originating from the right ovary (Figure 1,2).

With the preliminary diagnosis of duplication cyst, laparotomy and exploration were performed with a right upper transversal incision. During exploration, it was seen that the mass originated from the left ovary and the ovary was torsioned three times, together with the tubal structures (Figure 3,4). The mass was excised by performing salpingoopherectomy. The patient was discharged from the neonatal intensive care unit on the second postoperative day with full recovery.

In the ischemic areas, whose pathology is widespread coagulation necrosis and dystrophic calcification foci in the cyst wall, many primary oocytes with relatively preserved epithelial vitality in silhouette, primary follicles and single-layer focal folds consisting of flattened and cuboidal cells formed in a three-millimeter focus with a small number of secondary follicles, and serous cystadenoma with focal ciliated epithelium (Figure 5,6). There was no complications for 6 months follow-up period.
DISCUSSION

The small size of the abdomen in the neonatal period causes diagnostic difficulties in large masses (2). Although the success of imaging methods have increased, cases in which differential diagnosis cannot be made can be encountered (3). Intrauterine ovarian torsion is a rare disease which is frequently seen in right ovary although torsioned side was left ovary in our case (4).

The main problem in differential diagnosis is the size of the mass lesion. The larger the lesion, the more difficult it is to determine the source tissue by imaging methods. As in our case, the ovary may appear in the opposite half of the abdomen, or its connection with Douglas may not be shown on imaging and may be confused with lesions of renal or splenic origin (5).

Colonic duplications could not be excluded from the differential diagnosis by imaging methods in our patient because of the location of the mass and the ipsilateral ovary being shown. The size of the lesion and its wall structure and mesenteric cysts were thought to give similar appearances, and the surgical treatment was planned in such a way that appropriate intervention could be made for all of these pathologies. Laparoscopic and minimally invasive surgeries are advocated in current articles in the approach to ovarian pathologies (6). However, it is an accepted approach in the literature to perform explorative laparotomy with right upper transverse incision, especially in newborns, in pediatric patients for whom the differential diagnosis cannot be made (6).

Surgical intervention is inevitable in cases where malignant lesions may be encountered, albeit low, when complications that may result from compression of the mass are considered, and in cases where differential diagnosis cannot be made. How long the irreversible effect of ovarian torsion lasts is still controversial, and in lesions lasting more than two weeks, ovarian functions are not expected to be restored. Although some authors advocate follow-up after detorsion and cyst excision without oopherectomy, this is not possible in most cases (2). In addition, there are complications from not removing the necrotic material. In our case, Ovary preserving approach was not possible for our patient due to the presence of surgical findings, since the mass was diagnosed perinatally. Salpingooopherectomy was performed which is still the most common approach to these lesions in the current literature.

Although spontaneous torsion in the intrauterine period is the most common cause in evaluations for the etiology, ovarian cysts, mature immature teratomas and torsions originating from malignant masses can also be observed. However, in our patient, the diagnostic findings of the cyst causing torsion in the pathology were reached. There is no other treatment or follow-up requirement for serous cystadenomas of the ovary that are benign.

CONCLUSION

Today, more intrauterine problems can be detected thanks to pregnancy follow-ups and fetal imaging, and intrauterine torsion is one of the fetal pathologies that should be considered. Although the common approach is excision, we think that with the development of early postnatal or fetal surgery opportunities in the future, it will be possible to treat these lesions without causing organ loss.

ETHICAL DECLARATIONS

Informed Consent: All patients signed the free and informed consent form.

Referee Evaluation Process: Externally peer-reviewed.

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REFERENCES


