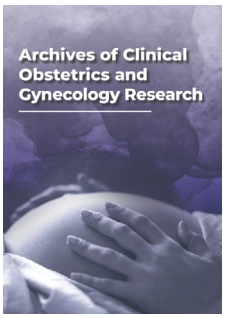
Archives of Clinical Obstetrics and Gynecology Research

Case Report



A Case of Dermoid Cyst at Douglas Pouch: A Case Report

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Abstract

Teratoma is most frequent in ovary and rare to be found in other sites. We present our experienced case of dermoid cyst located at Douglas pouch. A 50-year-old woman with gravida 2 para 2 was preoperatively diagnosed as left ovarian cyst (dermoid cyst) and planned surgical resection. Laparoscopic surgery revealed existence of enlarged cyst at Douglas pouch. Bilateral normal ovary was visually confirmed. We performed bilateral salpingo-oophorectomy and cyst resection at the Douglas pouch. Pathological finding revealed dermoid cyst was originated from ovary. To find out the findings to indicate the etiology during operation is quite important and further reports are warranted to share such kind of rare cases.

- Received Date: 13 Jan 2023
- Accepted Date: 20 Jan 2023
- Publication Date: 30 Jan 2023

Introduction

Teratoma is most frequent in ovary and rare to be found in other sites. In addition, teratoma is the most common germ cell tumor of the ovary and accounts for about 20% of all ovarian neoplasms [1]. In this report, we present our experienced case of dermoid cyst located at Douglas pouch with a review of previous studies.

Case report

A 50-year-old woman with gravida 2 para 2 was referred to our hospital because of the existence of ovarian cyst. She had no symptom, medical history and family histories. By the examination, goose egg size mass was palpable at Douglas pouch. Transvaginal ultrasound showed existence of low echoic cyst about 62mm diameter at Douglas pouch (Figure1a). The pattern of cyst in Magnetic Resonance Imaging (MRI) was low intensity in T1 weighted image (WI) with partially high intensity (Figure1b) and high intensity in T2WI (Figure1c). Fat suppression condition of T2WI showed basically high intensity (Figure1d). From the result of T1WI, our radiologist mentioned about the possibility of dermoid cyst. Also, this cyst was considered to be continued from left adnexa. Serum tumor makers such as CEA, CA19-9, CA125, and SCC were 0.8 ng/mL,36.6 U/mL, 7.8 U/mL and 1.4 ng/mL, respectively. Following these results, we preoperatively diagnosed as left ovarian cyst (dermoid cyst) and planned surgical resection.

Laparoscopic surgery revealed existence of enlarged cyst at Douglas pouch (Figure2). Bilateral normal ovary was visually confirmed and seemed to be slightly connected with left ovary by white tissue with spiral red vessel. Cyst itself was slightly adhered with the retroperitoneum, but no thick vessels to the retroperitoneum were found. We performed bilateral salpingo-oophorectomy and cyst resection at the Douglas pouch.

Pathological finding revealed existence of normal ovary at both adnexa. Regarding the cyst at the Douglas pouch, cystic lesion was surrounded by the keratinized stratified squamous epithelium and inside was filled with keratin contents, indicating pathological confirmation as a dermoid cyst. Moreover, corpus albicans was also found close to the cyst, meaning this dermoid cyst was originated from ovary.

Discussion

Teratoma consists of well-differentiated derivatives of germ cell layers (i.e., ectoderm, mesoderm, and endoderm) [2]. Therefore, it can occur in some organs and tissues in human, although from ovary is the most popular one. For example, teratoma at central nerve system accounts for 0.3–0.6% of primary intracranial neoplasms in children and at head and neck is extremely rare, account for approximately

Citation: Ikeda Y, Yoshida Y, Nakajima T, Ohni S, Kawana K. A case of dermoid cyst at Douglas pouch: A case report. Arch Clin Obs Gyn Res. 2023;3(1):1-3.

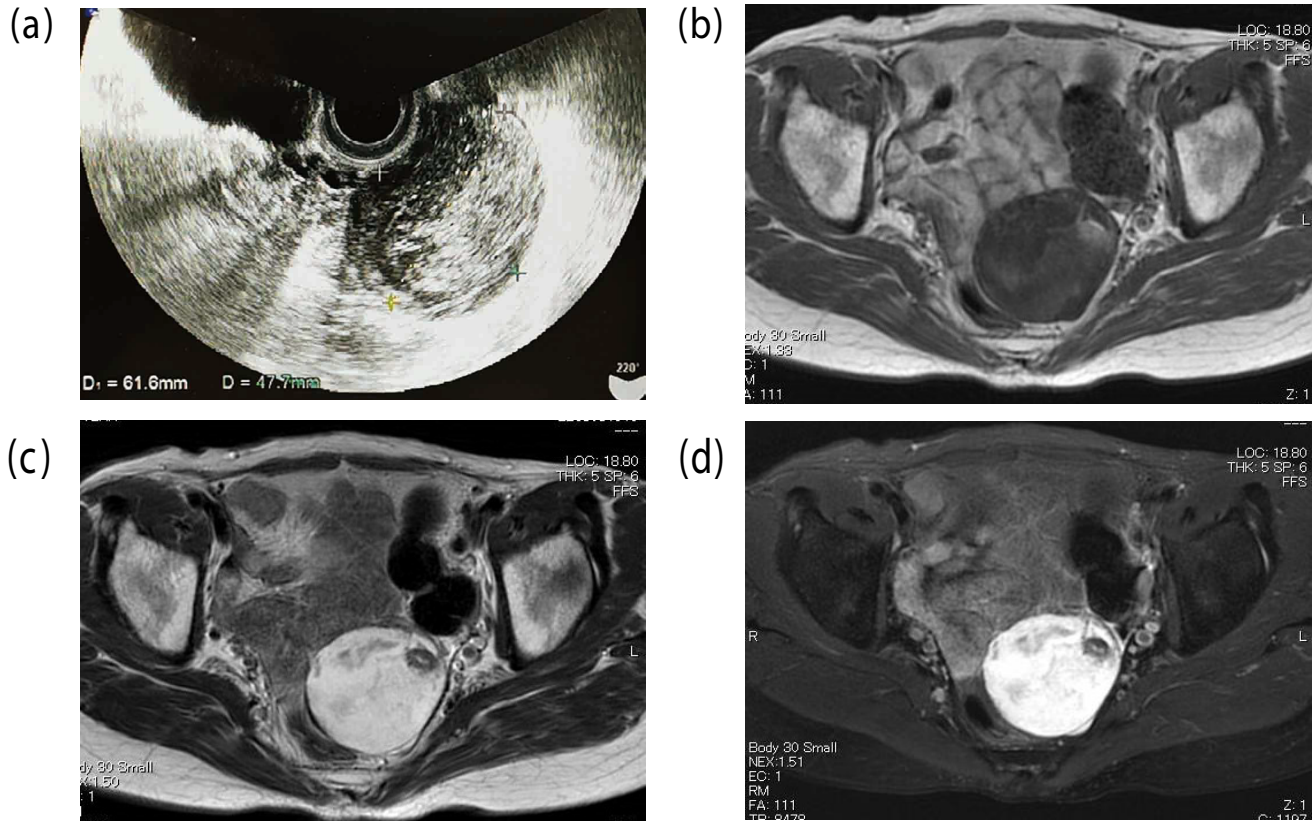

Figure 1. *Preoperative findings of teratoma*
(a) transvaginal ultrasound, and (b) T1 weighted image, (c) T2 weighted image of MRI (d) fat suppression in T1 weighted image of MRI with axial pelvic view

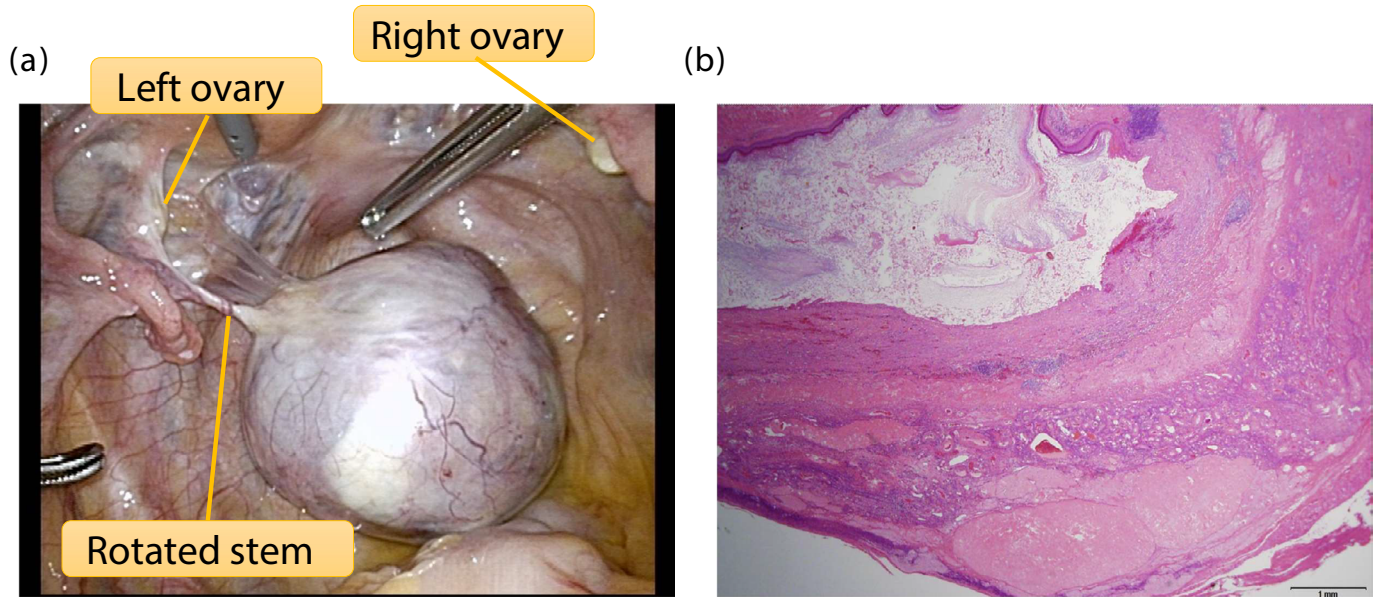

Figure 2. *Surgical and pathological findings*
(a) laparoscopic image of pelvis (b) pathological findings of teratoma cyst

5% of all the neonatal teratomas [3]. These cases are simply originated from local organs or tissues. Also, ectopic teratoma can be originated from ectopic organs. For example, Kidney is one of the previously reported locations for teratomas and other germ cell tumors; however ectopic kidney can be found in approximately of 1 in 5000 patients, meaning theoretically ectopic teratoma can be found from ectopic organ [1,3-5].

In our case, we could find dermoid cyst with corpus albicans at Douglas pouch, meaning this cyst is considered to be originated from ovary. Interestingly, both side of ovary were found with normal condition and location. Ectopic 'third' ovary might be the origin; however, rotated stem was visually confirmed between left ovary and cyst at Douglas pouch indicated that most reliable reason would be the autoamputation of teratoma from left ovary. Previously, A. Peitsidou et al. reported similar case an autoamputated ovary with dermoid cyst [6]. Peh et al. performed a narrative review of 20 cases of autoamputated ovary. With regard to the sites to which the ovary migrated, nine cases were observed in the pelvis, including one case in the Douglas pouch [1,6]. Moreover, ectopic teratoma at Douglas pouch is quite rare; to our knowledge, only 3 cases have been previously reported [6-8], meaning our case was extremely rare.

We tried to figure out the pathological evidence of continuous findings like ovarian tissue at rotated stem between ovary and teratoma; however no identical findings like albicans could be figure out by pathological findings. This is the weakness of this report; however, as shown in Figure 2a, findings of continuous lesion is obvious by color and location, also findings of autoamputation was strongly indicated by 'rolling' stem.

In this report, we presented the rare case of dermoid cyst at Douglas pouch. Preoperative diagnosis of ectopic teratoma is quite difficult [6], surgeon need to consider about the possibility like this case. Also, to find out the findings to indicate the etiology, like rolling stem in our case, during operation is quite important. Further reports are warranted to share such kind of rare cases.

Competing interests

All the authors declare no competing financial interests.

Sources of support

None

Disclosure of funding

All the authors declare non-financial competing interests.

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