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Giant peritoneal inclusion cyst mimicking ovarian cyst

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ABSTRACT

Benign cystic peritoneal mesothelioma also known as peritoneal inclusion cyst is a rare lesion that usually occurs in women of reproductive age. Giant peritoneal inclusion cysts are extremely rare and to the best of our knowledge only has been reported in man to date. Hereby, a case of a 45-year-old multiparous patient with a giant peritoneal inclusion cyst that mimicks an ovarian cyst is presented. The patient with a complaint of abdominal distention sought out to our outpatient clinic. In her medical history she has had neither prior surgery nor pelvic infection. Physical examination revealed a giant smooth surfaced pelvic mass originating from the left adnexal space. Ultrasonography and computed tomography images supported the pelvic examination. The patient underwent diagnostic laparotomy and frozen section analysis. Histopathological diagnosis revealed a peritoneal inclusion cyst with endometriotic focus. After one year from surgery, the patient has had no recurrences. Although giant masses of pre-menopausal women are usually malignant, clinicians may encounter with rare benign tumors such as peritoneal inclusion cysts and should be aware of them in the differential diagnosis.

1. Introduction

Cystic pelvic lesions of women are common. There are several cystic lesions of pelvis that mimick the ovarian cysts. Although the diagnosis of a non-gynecological tumor is easy when a separate ovary with regular morphology is shown by imaging technics, most of the cystic masses of pelvis have similar imaging features that cause trouble in the differential diagnosis [1].

Benign cystic peritoneal mesothelioma also known as peritoneal inclusion cyst is a rare lesion that usually occurs in women of reproductive age. These lesions may occur in pelvis, abdomen or retroperitoneal region [2]. Although they lead to symptoms according to their size, they are often detected incidentally at imaging. To the best of our knowledge there are reported cases of peritoneal inclusion cysts but cases with giant peritoneal inclusion cysts are extremely rare and all of the reported cases were in men [3–5]. Hereby, we intended to present a case with a giant peritoneal inclusion cyst in a premenopausal woman.

2. Case report

A 45 year-old multiparous woman with a complaint of

abdominal distention sought out to our outpatient clinic. In her medical history she has had neither pelvic surgery nor pelvic infection. Physical examination revealed a left sided pelvic mass extending beyond the level of umbilicus with a smooth surface. At ultrasonography, a multiloculated (170×100) millimeter in diameter pelvic cyst originating from the left adnexal region was shown. The tumor markers were in normal ranges. A computed tomography imaging was performed to detect the origin of the mass and images revealed a (260×160×150) millimeter in diameter septated cyst arising from the left adnexal region and extending to the level of renal artery. Laparotomy and frozen section analysis were performed. Laparotomy was performed with midline incision from symphysis to xiphoid to explore the whole mass. A 280 millimeter-diameter multiloculated mass originating from the posterior wall of the uterus and posterior sheet of the left broad ligament with attachments to the adjacent peritoneal surfaces was removed. After the removal of the mass, uterus and bilateral adnexes could be observed and they were normal. On frozen section analysis, the mass was reported as benign. Thereafter the patient underwent hysterectomy and bilateral salpingo-oophorectomy that was required for the treatment of accompanying endometrial hyperplasia. Postoperative recovery was uneventful and the patient discharged on the third day of the operation. On final prognosis the mass was reported as a peritoneal inclusion cyst containing endometriotic focus.

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Figure 1. Computed tomography image of the mass.

3. Discussion

Although peritoneal inclusion cysts are not mortal, they may cause discomfort and anxiety until the time of diagnosis. Because of the large, tumor like characteristics and up to 50% recurrence rates of these cysts, some authors suggested that these lesions have a neoplastic etiology, but the pathogenesis has not been identified yet [6]. Treatment modalities include follow-up, medication, aspiration, sclerotherapy and surgery [7–12].

Vallerie et al. reported that the prediagnosis may be performed with history, physical examination, ultrasonography and Ca125 levels but the final prognosis depends on the histopathology [13]. In our case the history, physical examination or ultrasonography of the patient was not useful in the differential diagnosis of the mass, so the mass was considered to belong to ovary and laparotomy was performed for an ovarian cyst.

Although these rare lesions are usually seen in women of reproductive age, there is a reported case of a postmenopausal woman with peritoneal inclusion cyst [14]. The patient in our case was premenopausal. Due to the rarity of peritoneal inclusion cysts in postmenopausal women, in a case the authors used GnRH analogues to treat a 17 year-old patient and they observed a shrinkage in the volume of the cyst. Six months after the therapy, with the administration of estrogen and progesterone they observed increase in diameter that presents the hormone dependent characteristics of the peritoneal inclusion cysts. In another report, a recurrent case was treated with tamoxifen and shrinkage of the cyst and relief of symptoms were observed [7,8]. The permanence of hormonal activity in the present case may be the reason of excessive growth.

Both laparotomy and laparoscopy may be used to treat these lesions. Lee et al. compared the efficiency of laparotomy and laparoscopy in the treatment of peritoneal inclusion cysts and they concluded the superiority of laparoscopy in experienced clinics [11]. However, Sethna et al. reported that the aim of the treatment should be cytoreductive surgery with peritonectomy and intraperitoneal chemotherapy should be received to control microscopic disease [6].

The pathological diagnosis of the present case was similar with the previously reported two cases whom possible

mechanisms of pathogenesis was related to adhesion and inflammation due to endometriosis [15].

Regardless of the mode of treatment, various rates of recurrence were reported [13]. On the first year of treatment, the present case has had no recurrences.

In conclusion, although the giant masses of premenopausal age are usually malignant, clinicians may encounter with extremely rare benign tumors such as giant peritoneal inclusion cysts and they should be aware of these tumors.

Conflict of interest statement

We declare no conflict of interest.

References

- [1] Moyle PL, Kataoka MY, Nakai A, Takahata A, Reinhold C, Sala E. Nonovarian cystic lesions of the pelvis. *Radiographics* 2010; **30**(4):921–38.
- [2] Urbańczyk K, Skotniczny K, Kuciński J, Friediger J. Mesothelial inclusion cysts (so-called benign cystic mesothelioma) A clinicopathological analysis of six cases. *Pol J Pathol* 2005; **56**(2):81–7.
- [3] Ozgen A, Akata D, Akhan O, Tez M, Gedikoglu G, Ozmen MN. Giant benign cystic peritoneal mesothelioma: US, CT, and MRI findings. *Abdom Imaging* 1998; **23**(5):502–4.
- [4] Häfner M, Novacek G, Herbst F, Ullrich R, Gangl A. Giant benign cystic mesothelioma: a case report and review of literature. *Eur J Gastroenterol Hepatol* 2002; **14**(1):77–80.
- [5] Vyas D, Pihl K, Kavuturu S, Vyas A. Mesothelioma as a rapidly developing Giant Abdominal Cyst. *World J Surg Oncol* 2012; **10**:277
- [6] Sethna K, Mohamed F, Marchettini P, Elias D, Sugarbaker PH. Peritoneal cystic mesothelioma: a case series. *Tumori*.2003; **89**(1):31–5.
- [7] Letterie GS, Yon JL. Use of a long-acting GnRH agonist for benign cystic mesothelioma. *Obstet Gynecol* 1995; **85**(5 Pt 2):901–3.
- [8] Letterie GS, Yon JL. The antiestrogen tamoxifen in the treatment of recurrent benign cystic mesothelioma. *Gynecol Oncol* 1998; **70**(1):131–3.
- [9] Inman DS, Lambert AW, Wilkins DC. Multicystic peritoneal inclusion cysts: the use of CT guided drainage for symptom control. *Ann R Coll Surg Engl* 2000; **82**(3):196–7.
- [10] Lim HK, Cho JY, Kim SH. Sclerotherapy of peritoneal inclusion cysts: a long-term evaluation study. *Abdom Imaging* 2010; **35**(4):431–6.
- [11] Lee SW, Lee SJ, Jang DG, Yoon JH, Kim JH. Comparison of laparoscopic and laparotomic surgery for the treatment of peritoneal inclusion cyst. *Int J Med Sci* 2012; **9**(1):14–9.
- [12] Tangjitgamol S, Erlichman J, Northrup H, Malpica A, Wang X, Lee E, et al. Benign multicystic peritoneal mesothelioma: cases reports in the family with diverticulosis and literature review. *Int J Gynecol Cancer* 2005; **15**(6):1101–7.
- [13] Vallerie AM, Lerner JP, Wright JD, Baxi LV. Peritoneal inclusion cysts: a review. *Obstet Gynecol Surv.* 2009; **64**(5):321–34.
- [14] Safioleas MC, Constantinou K, Michael S, Konstantinos G, Constantinou S, Alkiviadis K. Benign multicystic peritoneal mesothelioma: a case report and review of the literature. *World J Gastroenterol* 2006; **12**(35):5739–42.
- [15] Kurisu Y, Tsuji M, Shibayama Y, Yamada T, Ohmichi M. Multicystic mesothelioma caused by endometriosis: 2 case reports and review of the literature. *Int J Gynecol Pathol* 2011; **30**(2):163–6.