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Case Report

Huge Dermoid Cyst with Dense Bowel and Bladder Adhesions in a Postmenopausal Woman: Case Report and Review of Literature

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Abstract

Dermoid cysts are the most frequent benign ovarian germ cell tumor in adults and adolescents, accounting for roughly 10% - 20% of all ovarian tumors and constitute about 70% of benign ovarian masses before menopause. They are rarely seen in postmenopausal patients. We present case of post menopausal dermoid cyst with extensive bowel and bladder adhesion.

Keywords: *Mature Cystic Teratoma; Dermoid Cyst; Immature Teratoma; Postmenopausal Cyst; Bowel Adhesions; Ovarian Tumor; Exploratory Laparotomy*

Introduction

Dermoid cysts are common tumours, representing the most frequent benign ovarian germ cell tumor in adults and adolescents, accounting for roughly 10% - 20% of all ovarian tumors. They are frequently found during routine imaging, such as ultrasounds, and constitute about 70% of benign ovarian masses before menopause [1]. It is common in younger age groups below 20 years old and are in old age group [2]. Dermoid cysts are rare in postmenopausal women and their occurrence after menopause is considered an uncommon clinical phenomenon. They are bilateral in 10 - 13% of cases. The incidence of malignant elements in a teratoma is low (approximately 1 - 2%) [3]. They are encountered predominantly in women in their second and third decades of life and they rarely have adhesions. Adhesion to surrounding structures, particularly bowel and bladder is a rare but significant surgical concern.

Case Report

A 73-year-old postmenopausal woman (gravida 2, abortion 2, with no living issue) presented with complaints of lower abdominal pain of one week duration. She was apparently asymptomatic prior to the onset of these symptoms. Pain was not associated with any aggravating or relieving factors. There was no history of anorexia, evening rise of temperature or weight loss. She was hypertensive since 2 months on tablet amlodipine and telmisartan. On examination patient's general condition was fair with obesity (BMI-40), vitally stable and no abnormality detected in respiratory, cardiovascular or central nervous system.

On breast examination dense breast tissue felt bilaterally without any mass. Per abdominal examination: Obesity present. Per speculum examination suggestive of cervix and vagina healthy. Per vaginal examination: Uterus bulky and anteverted, uterine size could not be assessed due to abdominal obesity. Her per rectal examination was suggestive of firm mass felt anteriorly. All routine investigations were done and were found to be within normal limits. Tumour markers were done suggestive of CA-125: 23.24 U/ml, alpha fetoprotein: 3.71 ng/ml, Beta HCG: 1.63 mIU/ml. Her ultrasound done was suggestive of bulky uterus, well defined isoechoic homogenous lesion in the anterior fundal region measuring 5 x 7 x 6. 6cc with posterior acoustic shadowing with peripheral vascularity with no calcifications, few cystic spaces (FIGO IV fibroid degenerative changes).

With due high risk anaesthesia consent and availability of critical care unit, patient underwent exploratory laparotomy with left ovarian mass excision with total abdominal hysterectomy and bilateral salphingo-ophorectomy.

After opening peritoneal cavity, midline cystic mass seen densely adherent posterolaterally to bowel, inferiorly to serosa of colon and anteriorly to bladder base due to which it was difficult to exteriorise cyst. After careful dissection with harmonic, cyst was removed.

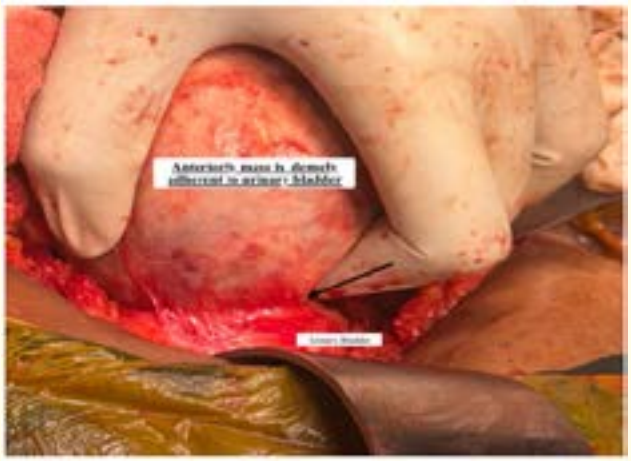

Figure 1

On gross examination: Cyst was tan coloured, approximately 8 cm x 6 cm x 5 cm firm in consistency, regular contour, thick walled.

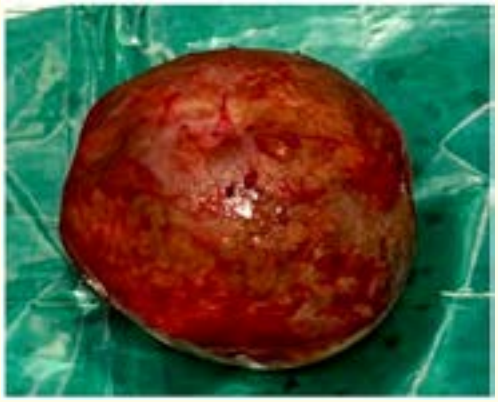

Figure 2

On cut section: Unilocular cyst containing greasy yellowish caseous material noted with multiple hair follicles.

Figure 3

Also, specimen of uterus with bilateral fallopian tubes and ovary sent for histopathology along with mass.

Post operative recovery uneventful.

Histopathology report suggestive of fibrocollagenous cyst wall showing sparse chronic lymphocytic infiltrate along with focal areas of calcification and ectodermal elements comprising of hair follicles, abundant keratin flakes with no evidence of atypia/malignancy, that is a dermoid cyst.

Case Discussion

Benign cystic teratomas, also known as ovarian dermoid cysts, represent the most common subtype of ovarian germ cell tumours, accounting for approximately 97% of all ovarian teratomas and 10 - 20% of all ovarian neoplasms. These tumours are typically slow-growing and are most frequently diagnosed during the reproductive years, with nearly 90% occurring in women of reproductive age. Grossly, they usually range from 5 to 15 cm in diameter and are often disproportionately heavy relative to their size due to the presence of sebaceous material, hair, and other differentiated tissues. In the present case, the patient was a 73-year-old postmenopausal woman, which represents an uncommon age group for this pathology. Notably, preoperative diagnostic evaluation did not conclusively identify the lesion as a dermoid cyst, thereby highlighting the diagnostic limitations and the need for a high index of suspicion, even in atypical age groups. Dermoid cysts are bilateral in 10 - 13% of cases. The incidence of malignant elements in a teratoma is low (approximately 1 - 2%) [3]. Mature cystic teratoma of the ovary is very rarely seen in the postmenopausal age group and has been associated with excessive androgen production [4].

In asymptomatic women, whether premenopausal or postmenopausal, with pelvic masses including ovarian mature cystic teratoma, transvaginal ultrasound scan (TVS) is the imaging modality of choice. No alternative imaging modality has demonstrated sufficient superiority to TVS to justify its routine use [5].

They are frequently multi-cystic and contain sebaceous fluid as well as hair, teeth, bone, and skin. Typically, these tumors contain mature tissues of ectodermal (skin, brain), mesodermal (muscle, fat), and endodermal (mucinous or ciliated epithelium) origin [6].

The Rokitansky protuberance is composed of the thickened area of ectodermal tissue from which hair and teeth arise. Pain is often related to the size of the mass, and ovarian torsion is common. Mature cystic teratomas grow slowly at an average rate of 1.8 mm each year, prompting some investigators to advocate non-surgical management of smaller (6 cm) tumours. There can be malignant transformation of mature teratoma. Also there is few cases reported in which benign tumor (Oftenly mucinous cystadenoma coexist with mature teratoma) [7].

It is hypothesized that the mostly sebaceous cyst contents slowly leak into the abdominal cavity through a small rupture site, leading to a chemical granulomatous inflammation response. This causes adhesion between the cyst and the adjacent organs, such as the urinary bladder, small bowel, colon, or rectum. Circulatory disturbance and inflammatory response are probably responsible for the fistula formation [8].

The surgical management of benign cystic teratoma should be directed according to age, desire for further fertility and presence of concomitant pelvic pathology rather than size or the laterality status. Our case had huge dermoid with extensive bowel and bladder adhesions which was challenging from surgical point of view.

Conclusion

Huge dermoid cyst in post-menopausal woman is a rare occurrence and sometimes considering the age, chances of malignant transformation are more. So, in any postmenopausal woman with mass in lower abdomen should be screened for malignant changes in it and also should do all the required tumour markers. In the doubtful situations and dense adhesions like in our case one can think of going with open laparotomy approach also. If there are no such complicated cases they can be operated with laparoscopic and robotic assisted surgeries.

Conflict of Interest

The authors declare no conflicts of interest.

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