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Case Report

Malignant transformation of ovarian dermoid: a rare case

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ABSTRACT

Mature cystic teratoma also known as the dermoid cyst is the most common benign tumor of the ovary (10 – 20%) in women of reproductive age. Malignant transformation in a dermoid is very rare (<2%) with squamous cell carcinoma being the most common malignancy. A total of 36 ovarian cysts have been operated in our hospital from the year February 2007 to April 2012 of which about 90% were dermoid but no case of ovarian dermoid turned malignant have been reported till date in our state, Sikkim, India. We report a rare case of dermoid cyst of ovary in a 47 yr old woman which had malignant transformation. Surgeons should keep the chance of malignant transformation in mind when faced with a dermoid cyst especially in older patients or in larger than usual so that the best can be done for the patient regarding the staging of the disease and its further management.

Keywords: Cyst, Dermoid, Ovary, Transformation, Malignancy

INTRODUCTION

Mature cystic teratoma (MCT) commonly known as dermoid cyst is the most common benign tumor of the ovary accounting for 10-20% of all ovarian tumors in women of reproductive age.[1] Approximately 90% are unilateral with a variable size of 5-10cm. MCT is composed of well-differentiated tissues derived from the three germ cell layers. Malignant transformation in a dermoid is very rare, about 1-2%.[2] We report a rare case of dermoid cyst of ovary which had malignant transformation.

CASE REPORT

A 47 years women attended our OPD on 9th April 2012 with an Ultrasonography report (done on 10th October 2011) showing bulky uterus with a small anterior wall myoma and a right adnexal mass (Dermoid cyst?). She complained of menstrual irregularity, heaviness and dull pain over the lower abdomen for the past one year which had increased in intensity for about 15 days for which she wanted treatment. She had sinus bradycardia and was a chronic hypertensive on medication. Her abdominal examination revealed a palpable mass about 16 weeks on the right iliac fossa. On vaginal examination uterus was normal in size and separate from the mass but was pushed towards the left as the cystic mass occupied the right fornix. An ultrasound repeated on 10th April 2012 to confirm the previous findings and also to know the size of the dermoid showed right sided ovarian dermoid about 14cm X 10.4 cm in size. Laparotomy was done on 11th April 2012. On opening the abdomen there was no adhesion and no free peritoneal fluid. Uterus was normal in size and shape, left sided tube and ovary were normal, right sided ovary showed the presence of a large cystic mass about 14cm X 10Cm. The cystic mass had regular and smooth surface with the capsule intact. There was a small firm mass (4cm X 4cm) attached over the superior surface of the cyst. Patient wanted the uterus and the opposite ovary to be preserved if they were normal so according to patient's request and the cyst being dermoid (which is benign in almost all cases) with no features of malignancy at the time of laparotomy, uterus and the opposite ovary were left behind while right sided

salpingo-oophorectomy was done. The specimen was cut in the operation theater which showed presence of sebaceous substance and hairs within the cyst. Cut specimen was sent for histopathological examination. Post operative period was uneventful and the patient was discharged on the 5th post operative day. Histopathological report showed squamous cell carcinoma over the solid areas of the cyst wall. Impression was mature cystic teratoma with malignant transformation. Patient was then referred to an Oncology center for further management.

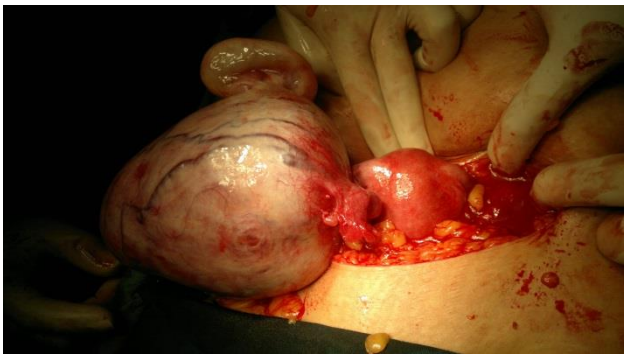

Figure 1: A large cystic mass.

DISCUSSION

Mature cystic teratoma are mostly benign so Squamous Cell CA arising from an MCT is a rare pathologic event (<2%). It is difficult to diagnose malignancy in dermoid as there are no specific signs or symptoms related to malignancy arising in a dermoid. Even in this patient, other than the size of the tumour, there were no features suggesting malignancy. A total of 36 ovarian cysts have been operated in our hospital from the year February 2007 to April 2012 of which about 90% were dermoid but no such case of ovarian dermoid turned malignant have been reported till date in our State, Sikkim, India. Risk factors for malignancy in a mature cystic teratoma have been found to include age over 45 years, tumor diameter greater than 10cm, and rapid growth.[3] SCC arising in an MCT has been observed usually in relatively older patients particularly after menopause. Although MCT presents in a wide range of sizes, larger tumors correlate with an increased risk of malignant transformation. In our case, the tumor diameter was around 14X10 cm, which is larger than a typical benign cyst. A study by Kikkawa et al.[4] showed that a tumor diameter of larger than 9.9 cm had 86% sensitivity for malignancy in their series. In general, it is recommended that a diameter equal or greater than 10 cm or an ovarian MCT demonstrating rapid growth should be suspected for malignancy. The prognosis for these tumors with features of metastasis has been often reported to be very poor with a five-year survival of only 15 – 30%.[2] Better prognosis has however been reported when the malignant element is an SCC compared with adenocarcinoma or sarcoma.[2] Also early detection and treatment of the SCC has better prognosis as reported in a case reports by S. Tangjitgamol et al.[5] In Peterson's study of 190 cases[6], metastases were noted in 64% of the patients and large intestine (23%) was most frequently involved. In a recently published case series of 11 cases, metastasis was noted in only 18% of the patients (2 cases), and the sites were rectum and urinary bladder.[7] Surgery has been opted as the main therapeutic approach to an ovarian MCT with malignant transformation.[6] For early stage IA disease especially for nulliparous and young patients who desire future fertility, conservative unilateral oophorectomy without further postoperative treatment may be justified, while in postmenopausal women, total removal of the reproductive organs would seem to be the procedure of choice.[8] The adjuvant therapy for SCC arising from an MCT has not been yet established.[6]

In conclusion, surgeons should keep the chance of malignant transformation in mind when faced with dermoid cyst which may appear benign during laparotomy especially in older patients or in larger than usual so that the best can be done for the patient regarding the staging of the disease and its further management.

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