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Ovarian dermoid cyst with malignant potential

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Abstract

The incidence of dermoid cyst accounts for approximately 20% of all ovarian tumours. They occur more commonly in reproductive age group of women and are usually unilateral. Oophorectomy is the operative procedure of choice and is usually curative. Malignant transformation of the mature elements within the dermoid cyst is a rare complication, occurring in only 1–2% of cases, with squamous cell carcinoma being the most common type (making up to 80–90%), followed by adenocarcinoma. The Malignant transformation is mostly seen in postmenopausal women. We present a case of Ovarian Dermoid cyst with malignant transformation to Squamous cell carcinoma in a 40 yr old female, which was confirmed by Immunohistochemistry. This case has been presented because of the rarity of malignant transformation at that young age.

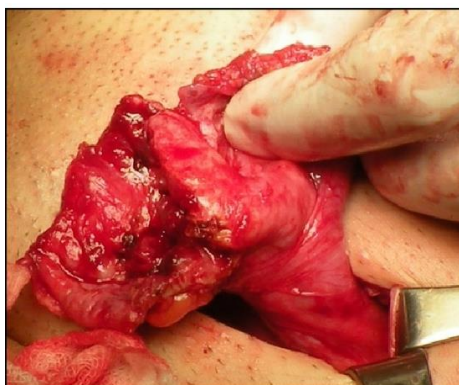
Keywords: Dermoid cyst; reproductive age group; ovarian tumours

Introduction

Dermoid cyst or Mature Cystic teratoma constitutes to 15-25% of ovarian neoplasms. They are composed of well differentiated elements of the three germ layers, Ectoderm, Endoderm & Mesoderm. Malignant transformation is rare accounting for 1-3%. Most common being squamous cell carcinoma. Other tumors arising in a mature cystic teratoma include adenocarcinoma, thyroid carcinoma, malignant melanoma, transitional cell carcinoma, sarcoma, carcinoid tumor, and neuroectodermal tumor. The frequency of malignant change increases with increasing age rising to 19% after menopause. However, it has been reported in young women of around 30 yrs. Common symptoms are abdominal pain & mass per abdomen. Symptoms due to invasion of nearby organs may also be present. Oophorectomy is the operative procedure of choice and is usually curative. The present case was reported in 38 yrs. old female

Case Report

A 38-year- old woman presented with pain abdomen and mass per abdomen since 3 months. Clinical examination showed a palpable lump in the right iliac fossa. The mass was cystic and non-tender with well-defined margins. No free fluid was detected in the pelvic cavity. A provisional diagnosis of left side ovarian cyst was made. Ultrasound abdomen showed a complex right side ovarian mass with partially echogenic components measuring 3*4*4 cm size and CT Abdomen showed Right Ovarian Dermoid, fibroid uterus, subcentimetric paraaortic lymph nodes and the diagnosis offered was right ovarian Dermoid cyst. Patient planned for elective surgery, Right ovarian cystectomy with uterine myomectomy done, specimen sent for Histopathological examination and it was reported to have malignant potential



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Discussion

Malignant transformation in a dermoid cyst of the ovary is a rare complication occurring in only 1-2% of cases, with Squamous cell carcinoma being the most common type occurring in 80% of cases followed by adenocarcinoma. This tumor is age related; although the age of patients with this tumor ranged from 21 to 87 years in the literature, this tumor occurs most frequently in postmenopausal women. The common symptom is abdominal pain followed by abdominal or pelvic mass, but the patients may be asymptomatic. Pre-operative diagnosis of malignant transformation is very difficult clinically as well as sonologically because this tumour cannot be readily differentiated from an uncomplicated dermoid cyst or other ovarian tumours. Malignant transformation in mature cystic teratoma occurs at an older age when compared to the age incidence of other malignant germ cell tumors. It is important to differentiate mature cystic teratoma from malignant transformation preoperatively because the surgery performed is different in both the conditions. Studies showed that old age, tumor size and solid portion in mature cystic teratoma seem to predict the malignant transformation. In their study they found that mean age for mature cystic teratoma is 37.5 yrs and that for malignant transformation was 55.2 yrs.

The main therapeutic approach to an ovarian mature cystic teratoma with malignant transformation has been surgical. Conservative unilateral oophorectomy without further post-operative treatment may be justified for early stage IA disease, especially for nulliparous and young patients who desire to have children. However, in the post-menopausal women, total removal of the genital organs would seem to be the procedure of choice.

Prognostic indicators of survival are FIGO stage, residual tumor, rupture or spillage, tumor grade, vascular involvement and mode of infiltration. The prognosis of Squamous cell carcinoma is much worse than that of other epithelial ovarian cancers. Adequately staged patients with disease confined to the ovary have a much better prognosis with 5-year survival rates approaching 95%

Conclusion

Purpose of this case presentation is to create awareness among clinicians while dealing with dermoid cysts of large size, to consider the chance of it being malignant, even in younger age group, and also to emphasize the importance of histopathological examination in Dermoid cysts which may sometimes be overlooked. This also helps in proper planning of treatment modalities and to decrease the mortality.

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