

An Interesting Case of Dermoid Cyst Ovary.

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Case Report

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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 38 yr old female, Which was confirmed by Immunohistochemistry. This case has been presented because of the rarity of malignant transformation at that young age .

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% [1,2]. 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 [4,2]. The frequency of malignant change increases with increasing age rising to 19% after menopause [3]. However, it has been reported in young women of around 30 yrs [4]. 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. (5) 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 left 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 left side ovarian mass with partially echogenic components measuring 16 x 12 x 10 cm size and the diagnosis offered was Dermoid cyst. Hysterectomy with left salpingo-oophorectomy was done and the specimen received for histopathological examination. On gross examination specimen of Uterus measuring 11x7x4 Cms, Cervix unhealthy, cut section of uterus appears normal. Ovarian cyst measuring 16x12x10Cms surface smooth and congested. Cut section shows cyst with multiple locules and it is filled with pultaceous material, hair, greasy material. And a Focus of small cyst with colloid like material with a solid gray white area of 5x3 cms with areas of necrosis.(FIG-1). Multiple sections studied from the uterus showed proliferative endometrium and cervix with chronic nonspecific cervicitis changes. Sections from the ovarion cyst showed dermoid cyst with keratinised squamous epithelium, adnexae and focal areas showed thyroid follicles and fat. (FIG 2) Sections from the solid gray white areas showed large sheets of pleomorphic tumor cells with foci of multinucleate tumor giant cells. (FIG-3)The individual tumor cells have moderate eosinophilic cytoplasm with

hyperchromatic nucleus and prominent nucleoli.(FIG-4) The case was diagnosed as squamous cell carcinoma in mature cystic teratoma . Immunohistochemistry with cytokeratins 5 and 6 was done; it was positive and the diagnosis was confirmed. (FIG 5-6).



Figure 1: Gross photograph showing ovarian cyst measuring 16x12x10Cms , surface smooth.C ut section shows multilocular cyst and the cyst filled with pultaceous material, hair and greasy material. Focal solid, grey white area measuring 5x3 cms with areas of necrosis.

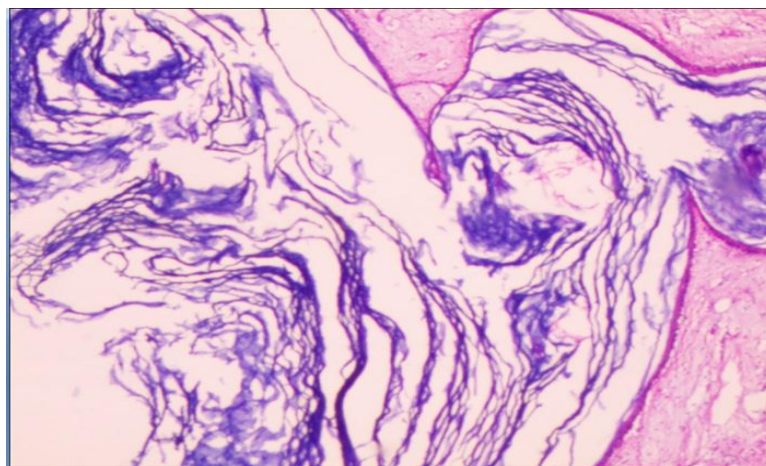


Figure 2: Photomicrograph showing cyst wall with keratin material 100X (H&E)

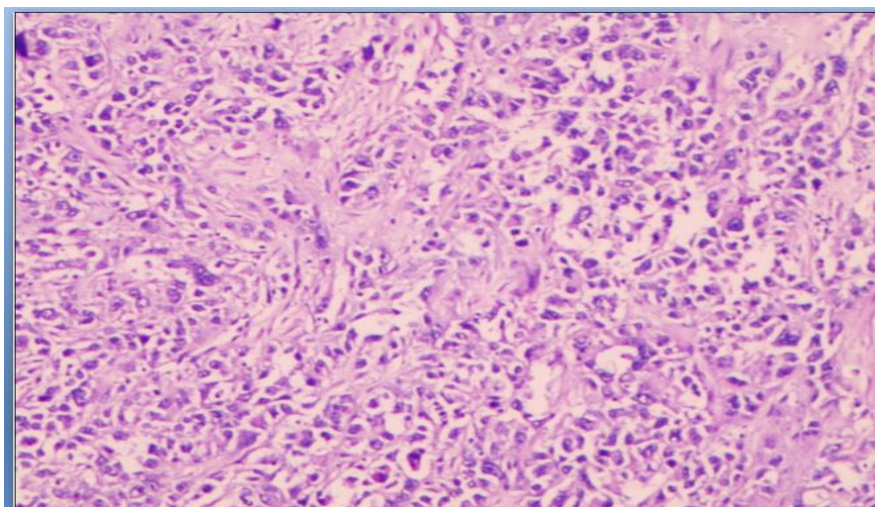


Figure 3: Photomicrograph showing round to polygonal cells with marked nuclear pleomorphism, hyperchromasia and mitotic activity 100x (H&E)

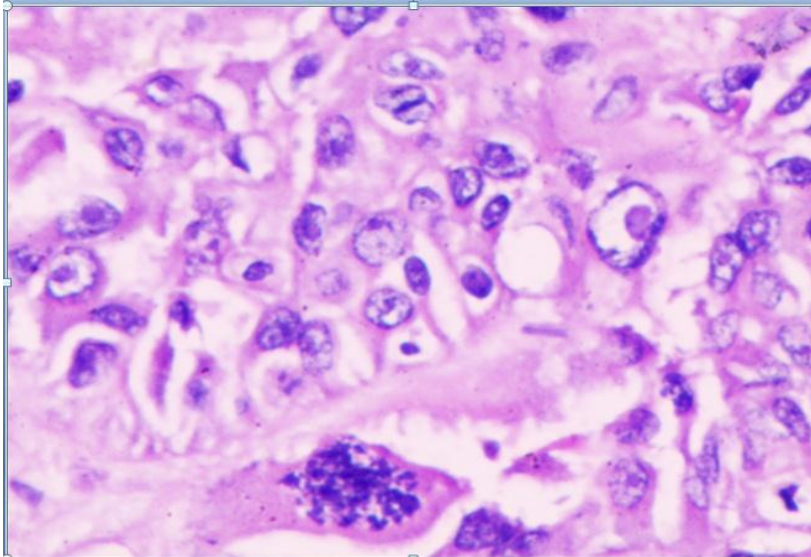


Figure 4: Photomicrograph showing round to polygonal cells with marked nuclear pleomorphism, hyperchromasia and mitotic activity and foci of Pleomorphic giant cells 400x (H&E)

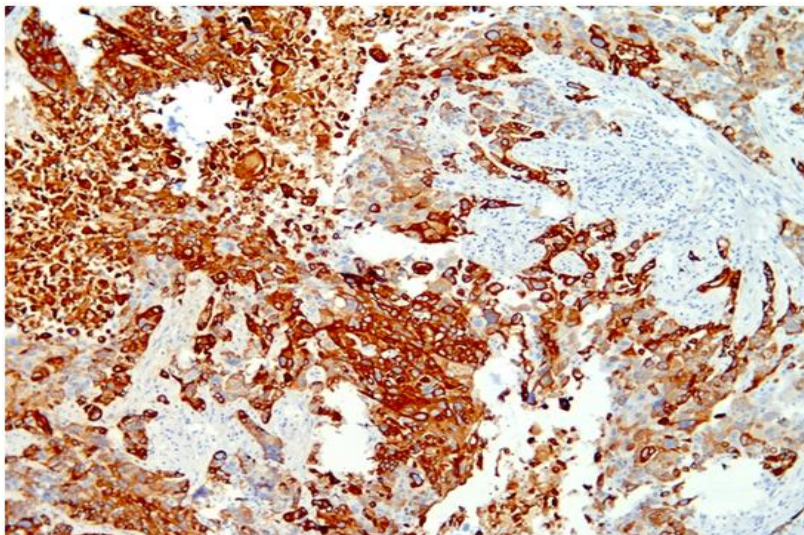


Figure 5: Photomicrograph showing immunohistochemistry positivity for Cytokeratin 5/6 100x

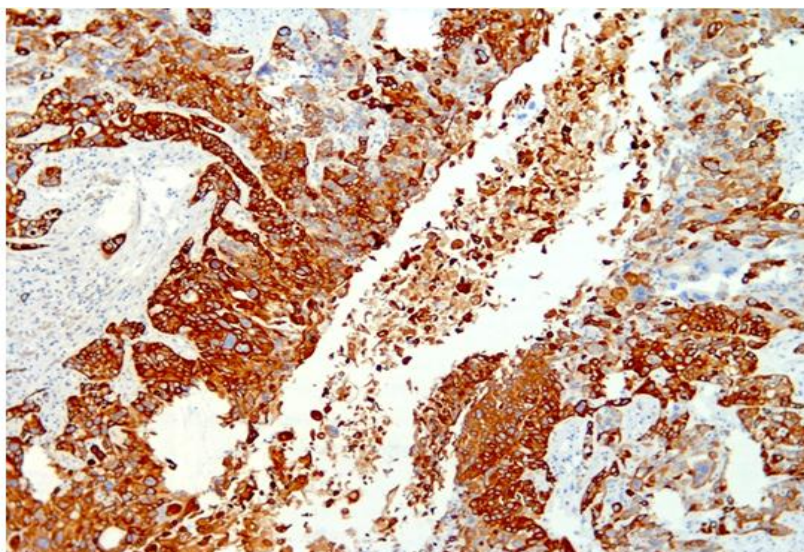


Figure 6: Photomicrograph showing immunohistochemistry positivity for Cytokeratin 5/6 100x

DISCUSSION

Dermoid cysts or mature cystic teratomas are one of the most common tumors that occur in women during their reproductive life, accounting for almost 20% of all ovarian tumors. ⁽⁶⁾ They are part of a subclass of ovarian germ cell tumor believed to arise from the primordial germ cells. Such origins give rise to the bizarre gross appearance of these tumors⁽⁷⁾. They are generally unilateral and oophorectomy, the operation of choice, is usually curative ^[5]. Some common sites for Dermoid cysts is Ovary, Testis, Mesentery, Floor of the mouth, Middle ear.

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 ^[8]. The common symptom is abdominal pain followed by abdominal or pelvic mass, but the patients may be asymptomatic ^[9]. 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 ^[8]. Malignant transformation in mature cystic teratoma occurs at an older age when compared to the age incidence of other malignant germ cell tumors ^[10]. It is important to differentiate mature cystic teratoma from malignant transformation preoperatively because the surgery performed is different in both the conditions. Studies of Kikkawa et al 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 ^[12].

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% ^[13].

In our case, the age of the patient was 38yrs and tumour size was around 16x12x10cm, with solid gray white area. The malignancy was limited to the ovary. There were no peritoneal implants. Post operatively patient was followed up for 1 year and she was asymptomatic.

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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