PATHOLOGICAL DIAGNOSIS

Squamous Cell Carcinoma arising in a Cystic Teratoma

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Abstract

Malignant transformation in a benign cystic teratoma occurs in 1-3% of cases. A rare case of squamous cell carcinoma arising in a benign cystic teratoma of ovary in a 37 year old female is reported. The patient presented with increasing abdominal girth and pain abdomen and was clinically diagnosed having a large ovarian cyst.

Keywords

Teratoma, Dermoid, Ovarian cyst, Squamous carcinoma.

Introduction

Benign cystic teratoma (Dermoid cyst) is one of the most common ovarian neoplasm. It accounts for 95% of all ovarian teratomas, composed entirely of mature adult tissues, usually representing all three germ layers. The typical dermoid cyst contains a prominent unilocular cavity lined by skin and filled with hair and sebaceous oily liquid (1). These cysts, for all practical purposes are benign. Malignant transformation occurs in 1-3% of benign cystic teratomas (2,3), with squamous cell carcinoma accounting for 90% of these cases (4,5). The remainder are adenocarcinoma, sarcoma, melanoma and other rare tumours (6). The present case is being reported because of its histological rarity.

Case Report

Thirty-seven year old female presented with 3 months history of swelling of abdomen accompanied by pain of 1 month duration. On physical examination a large abdominal mass arising from pelvis was palpated. The height of the mass was corresponding to 34 weeks of gestation. A clinical diagnosis of the left ovarian mass was made. Exploratory laparotomy was done and a large cystic tumour of left ovary was removed. There were no adhesions or peritoneal implants.

Pathological Findings

The surgical specimen consisted of large ovarian cyst alongwith uterus, both tubes and other ovary. The cyst measured 22 cm in diameter. The surface was smooth with prominent veins on it. There were irregular greyish white excrescences in the opened up cyst (Fig 1). The contents of the cyst consisted of pasty sebaceous material mixed with hair. The wall of the cyst measured 0.1 to 0.2 cm with a few firm areas having cartilagenous feel. The histologic examination showed the cyst wall lined by stratified squamous epithelium (Fig 2). There were islands of mature cartilage in the wall (Fig 3). Section from the irregular solid areas showed a well differentiated

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keratinizing squamous cell carcinoma arising from the lining of cyst wall. (Fig 4) No tumour was present on the surface of cyst. A diagnosis of well differentiated (keratinizing) squamous cell carcinoma arising in a benign cystic teratoma of the ovary was made.

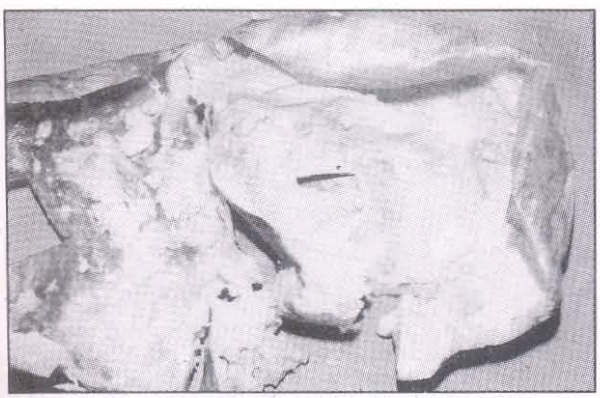

Fig. 1 : Opened up cyst showing whitish irregular tumour. The contents have been removed.

Fig. 2 : Showing cyst wall lined by stratified squamous epithelium (H&E × 100).

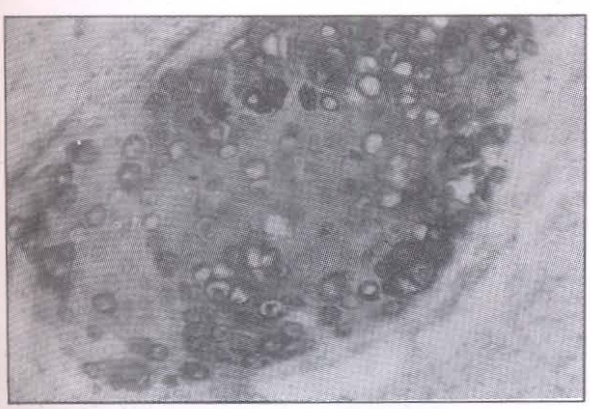

Fig. 3 : Showing mature cartilage in the cyst wall (H&E × 400).

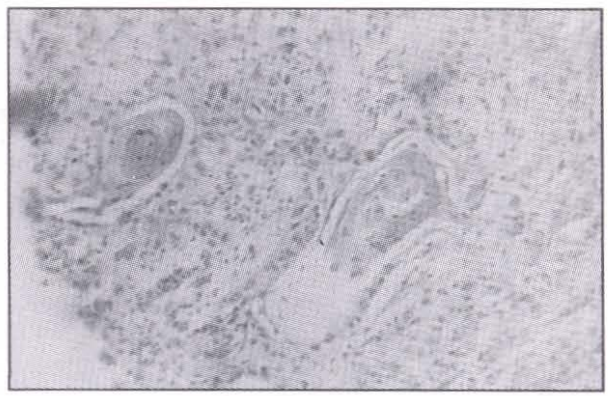

Fig. 4 : Showing well differentiated squamous cell carcinoma. Note keratin Pearls (H&E × 100).

Discussion

Malignant transformation in a benign cystic teratoma is quite rare. Malignant change occurs most commonly in women between 40-60 years (7). Our patient was comparatively younger. Squamous cell carcinoma is the most common malignancy arising in the dermoid cyst. Prognosis is largely affected by the extent of the disease at the time of diagnosis (8). Two origins, epidermal and respiratory, have been suggested for squamous cell neoplasms in situ occurring either alone or in the vicinity of and in transition with invasive squamous carcinoma (4). Some squamous cell carcinomas have originated from respiratory epithelia and histologically may resemble some types of carcinomas of the bronchus (9). In our case, the carcinoma is arising from the squamous lining of the cyst wall. The spread of a squamous cell carcinoma from a cystic teratoma is principally by direct extension to pelvic structures. The most important factor governing prognosis is whether or not the cyst wall is perforated by tumour at the time of operation (7). Thorough sampling of the cyst wall should be done in a benign cystic teratoma including solid and irregular areas to rule out malignant change.

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