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Black Sponge Masses in Adnexa: A Case of Ovarian Serous Cystadenofibroma with Scattered Lesions in Pelvic Cavity, A Masquerader of Malignancy

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Abstract: ***Surface Epithelial tumors of the ovary compromise over fourth of the ovarian neoplasms. Serous adenofibromas are lesser known variants of serous surface epithelial tumors. Though these tumours have a benign fate, Yet they can be misinterpreted clinically and radiologically due to their borderline or malignant gross morphological as well as clinical presentation. Adenofibromas are known to progress in an indolent manner with metachronous behaviour for years. The present case is of an ovarian serous cystadenofibroma in a 43years old female masquerading as peritoneal Carcinomatosis***

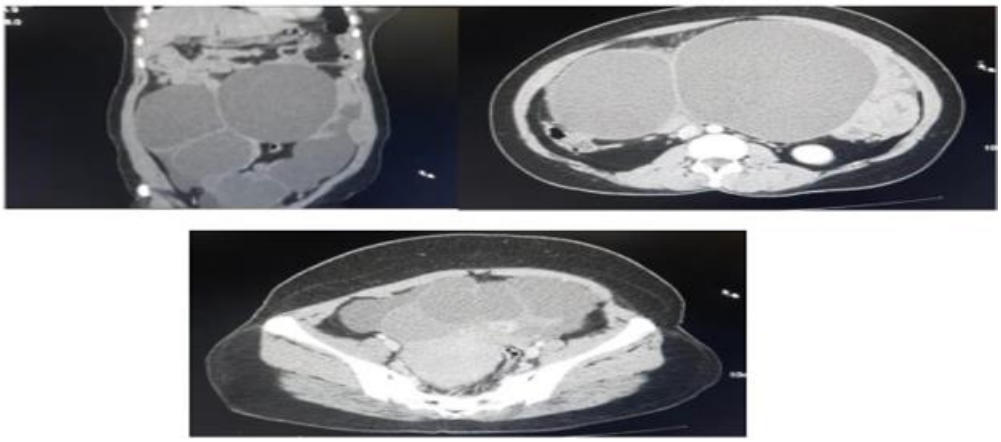
Keywords: Epithelial tumors, peritoneal carcinomatosis, serous cystadenofibromas

1. Introduction

Surface epithelial tumors are the most common neoplasms of the ovary and majority occur in women of between fourth to sixth decade. Benign serous tumors of the ovary account for approximately 16% of all ovarian epithelial neoplasms and approximately 30 - 50 % are bilateral. In some serous neoplasms, the fibroblastic stromal component is unduly prominent, appearing grossly as solid, white, nodular foci in an otherwise typical cystic neoplasm. These can be separated in to benign (adenofibroma and cystadenofibroma), borderline and malignant (adenofibrocarcinoma and cystadenofibrocarcinoma) types (1, 2). The benign serous tumors often arise in the surface or cortex of the ovaries, often discovered as an asymptomatic incidental mass, abdominal pain and genital bleeding may be present. Similar tumors in extraovarian sites occasionally accompany benign serous tumors

2. Case Report

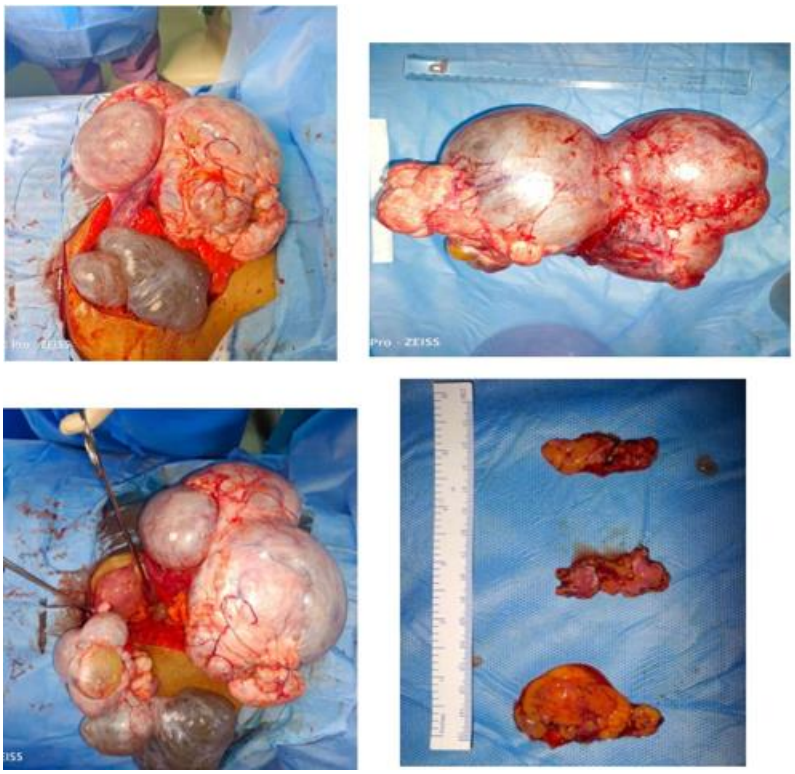
A 43 year old female, Para2, Living2 tubectomised presented with complaints of abdominal discomfort since 2 months and lower abdominal pain dull aching, intermittent type since 1 month. No significant past or family history noted. she was examined where per abdominal examination revealed irregular, firm, Mobile mass corresponding to 32 weeks gravid uterus, with indistinct borders, deviated to left side, occupying hypogastric, umbilical, left hypochondrium, bilateral lumbar, illac region. Per vaginal and rectal examination showed uterus corresponding to normal size, felt separately from mass, right side deviated, Bilateral fornices fullness present, no POD nodularity, rectal mucosa free Computed tomography (CECT) abdomen and pelvis showed large multiloculated cystic lesion about (23×13× 26cm) involving the bilateral adnexa. The lesion shows enhancing solid components at the periphery of the cyst. The lesion is seen extending superiorly up to level of transverse colon and inferiorly involving the bilateral adnexa. Posteriorly the lesion is abutting the bladder and fundus of the uterus. No evidence of any calcification. Minimal free fluid noted in the abdomen. Liver shows the focal hypodense lesion noted in the segment VII measuring about 23mm, suggestive of metastasis. Radiological Impression was of bilateral adnexal malignant ovarian neoplasm with liver metastasis



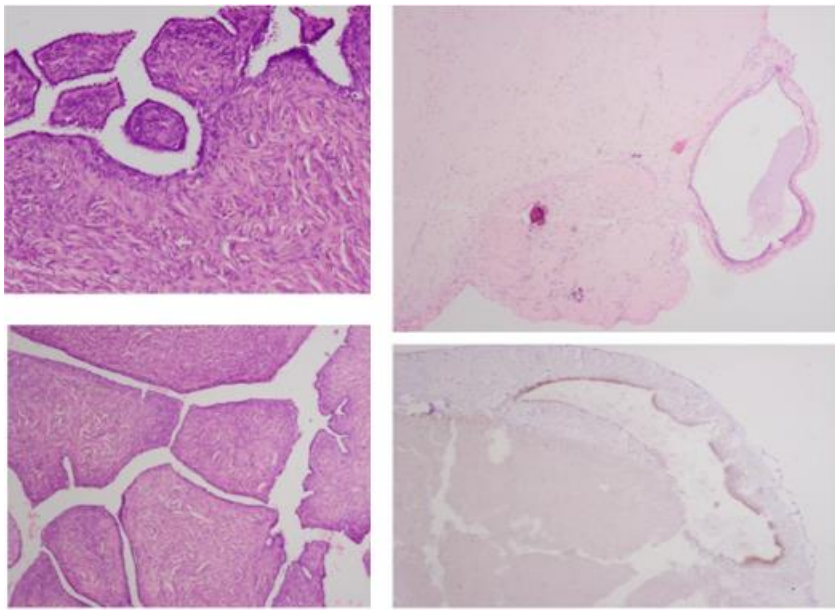
Figures: Sagittal and coronal views of CECT ABDOMEN AND PELVIS showing bilateral ovaries exhibited a lobulated nodular structures containing many cysts

Hypodense focal lesion in liver, biopsy was done preoperatively reported as haemangioma. Tumor markers CA125 - 259 U/ ml, CA 19 - 9 24 U/ ml, CEA – 1.1 ng / ml noted.

Based on the clinical and radiological findings, staging laparotomy was performed. Intraoperative findings are bilateral ovarian mass yellowish white solid masses of various size were present in bilateral ovaries, Scattered lesions in the base of bladder and caecum, omentum, mesentery, Pouch of Douglas noted. Intra operative frozen section diagnosis turned out to be borderline serous ovarian tumor. Patient underwent Total abdominal hysterectomy and bilateral salpingo oophorectomy, along with bilateral pelvic lymphadenectomy, omentectomy, removal of multiple nodular growths found in the peritoneal cavity and sent for histopathological examination



Figures: Grossly, the tumors encompassing both Ovaries bilaterally measured to be size of right ovarian mass measuring 20× 20× 16 cm and left ovarian mass measuring 14× 10× 7 cm. With varying sized nodules respected from the peritoneal cavity. All tumor Grossly appearance as grayish white to tan yellow and few haemorrhagic. The nodules were firm to cystic cut section in nodules showed fibromatous surface with papillary projections noted throughout the surface of solid tumor



Microscopically, the solid nodules showed predominant stromal fibromatous areas along with presence of glands which are lined by simple cuboidal cells

Histopathological report came as "BENIGN SEROUS CYSTADENOFIBROMA" similar pathological findings were noted in the scattered lesions

Post operative course was uneventful and the patient was discharged on the fourth day. She is being followed up every 3 months with outpatient transvaginal ultrasound and tumor markers (CA 125 levels). She has not had ovarian enlargement or increased tumor markers for 18 months after surgery

3. Discussion

A typical serous cystadenoma is rather a benign condition with no further consequences, unless left unattended surgically. However certain variants of benign serous epithelial tumors. such as the serous cyst adenofibroma, have clinical presentation mimicking carcinoma like features, at times they can be limited to one ovary or spread to the contralateral ovary. The origins of such multiple masses in a benign cyst adenofibroma is perplexing. The serous cyst adenofibromas may present as solid multiple nodules which may extend in to extraovarian sites as in coelomic, peritoneal cavity. Histologically, the tumors have traditionally been thought to derive from the epithelium that normally lines the outer aspect of the ovary, variously referred to as surface, coelomic or germinal (3).

This epithelium is continuous with the mesothelium that covers the peritoneal cavity, representing a modification of it and sharing with it a common origin and many morphologic features (4).

Theoretically, they could develop through two different mechanisms: 1. Spread from an ovarian (or less commonly, endometrial or tubal) source.2) autochthonous origin from the so – called "secondary mullerian system" i. e. the pelvic and lower abdominal mesothelium. The two most important manifestations of the process are designated, respectively as implants and endosalpingiosis. implants can be non- invasive (epithelial or desmoplastic) and invasive implants. There is a rare case report of endosalpingiosis forming mass lessions resembling neoplasms (5).

In the serous cystadenofibroma, interstitial fibrous components are dominant and cystic components are present in a mixture at varying ratios. Therefore, on T2 – weighted MRI, small cysts exhibiting punctate high intensities are scattered centering on a low intensity solid mass, so called a **"BLACK SPONGE – LIKE APPEARANCE"** (6). Providing valuable guidance for preoperative diagnosis. In a study by Cho et all, all 16 cases of ovarian cystadenofibromas, presenting as complex cystic masses with solid components, were preoperatively misdiagnosed as malignant ovarian neoplasms noted (7). This case report might be helpful in making a decision.

It can be thus concluded that such benign tumors with excellent prognosis, can be at times overlapped clinically and radiologically with a misleading grave diagnosis. it is imperative to utilise frozen section based histopathological intraoperative diagnosis by oncopathologist to prevent potential mismanagement, especially in young patients seeking fertility preservation.

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