



MUCINOUS CYSTADENOCARCINOMA OF OVARY WITH METASTASIS TO OMENTUM IN A 19 YEAR OLD: A CASE REPORT

Pathology

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ABSTRACT

Epithelial tumors of the ovary are derived from ovarian surface epithelium and are categorized as benign, malignant and borderline based on their pathologic features. Epithelial ovarian carcinomas are rarely reported at a young age. Majority of the reported cases at this age are benign or borderline cystadenomas while cystadenocarcinomas are very rare. We report a case of Mucinous Cystadenocarcinoma in a 19 year old girl with omental metastasis at the time of presentation.

KEYWORDS

mucinous cystadenocarcinoma, ovarian neoplasm, metastasis, omentum

INTRODUCTION

Epithelial tumors originate from the surface of the ovary.^[1] There are three major histologic types based of differentiation of the neoplastic epithelium: serous, mucinous and endometrioid tumors.^[2] Mucinous tumors accounts for 20% to 25% Epithelial tumors of ovary are common in adults, rare in children and teenagers. Carcinomas occur chiefly in perimenopausal and post menopausal women. Mucinous carcinoma was previously a common diagnosis but is now viewed as an unusual carcinoma accounting to 3% of primary ovarian carcinoma. This is because ovarian tumors previously classified as carcinomas are now classified as Borderline tumors with intraepithelial carcinoma. The average age of presentation is mid-50s. Mucinous carcinomas rarely have lymph node metastasis and therefore lymph node dissection is not required. The carcinoma that show an expansile type of invasion rarely spread beyond the ovary.^[2] Majority of the reported cases of this age are benign or borderline cystadenomas. Here, we report a case of Mucinous Cystadenocarcinoma with omental metastasis in a 19 year old patient.

CASE REPORT

A 19 year girl presented to the gynaecology out patient department with complains of abdominal distension which had an insidious onset and gradually increasing in size. General physical examination was unremarkable. Abdominal examination showed generalized abdominal distension.

The ultrasound showed a large solid cystic, multiloculated lesion measuring 16x10x8cms arising from the pelvis. The patient underwent left sided salpingo-oophorectomy along with omentectomy.

Grossly, the mass measured 16x9x8cms, greyish white in colour with capsule intact and a lobulated surface. On cut open section, the mass showed both solid and cystic areas, multiloculated filled with mucinous fluid, the cysts ranged from 0.5 to 4.5cms in size. Along with the ovarian mass, part of the omentum was also received which measured 15x6x1cm, it was greyish yellow in colour, soft to firm in consistency. No lymph nodes were found.

The sections were subjected to Hematoxylin and Eosin staining. Sections shows back-to-back arrangement of glands lined by atypical tall columnar mucin secreting cells, the nuclei showed pleomorphism, high N:C ratio and a prominent nucleoli. Stromal invasion was seen. The sections from omentum showed infiltration by tumour cells.



Figure 1: GROSS: Ovarian Cyst. Cut Section Is Solid Cystic With Multiloculated Cyst Filled With Mucinous Material.

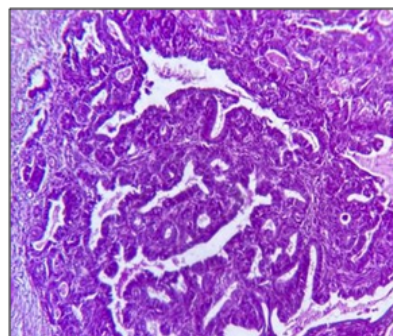


Figure 2: MICROSCOPY: Back To Back Arrangement Of Glands Lined By Atypical Tall Columnar Mucin Secreting Cells.(10X)

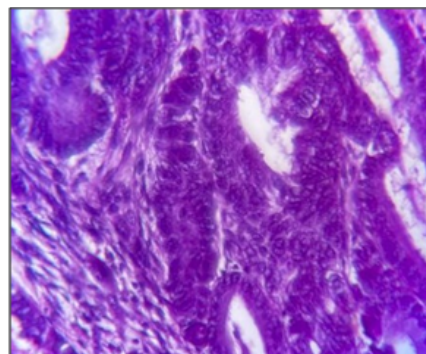


Figure 3: Microscopy, Section Shows Stromal Invasion.(40X)

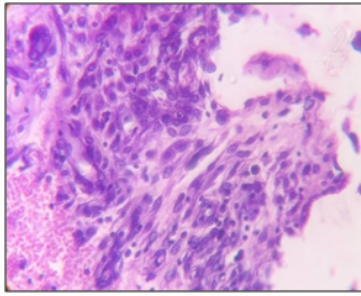


Figure 4: Microscopy, Section Shows Tumor Cells Infiltrating The Omentum.(40X)

DISCUSSION

Ovarian neoplasms are not common in the pediatric population, studies show an estimated incidence of 2.6 cases per 100,000 girls per year. Ovarian malignancy in children and adolescents is reported in 10–20% of all ovarian neoplasms, 1–2% of which comprises all childhood malignancies. In a case series of 1037 malignant ovarian tumors, the age-adjusted incidence of ovarian malignancy was 0.102 per 100,000 per year in children less than 9 years and 1.072 per 100,000 per year in girls aged 10–19 years. In contrast, the age-adjusted incidence in women more than 20 years of age is reported to be 11.446 per 100,000 per year. Ovarian malignancies in children and adolescents are rare as compared to that of adults^[3]

Mucinous cystadenocarcinomas, the glands and cyst are crowded and complex with irregular infoldings and protrusions into the stroma. The cells are columnar with eosinophilic cytoplasm and tend to stratify into two or more layers. The nuclei are enlarged and vesicular with coarse chromatin and a prominent nucleoli. Few to many mitotic figures usually noted. Stromal invasion by irregular cords and nest of tumor cells (destructive stromal invasion) or confluent expansile back to back glands or papillae are diagnosed as mucinous glands.^[2]

Mucinous tumors should be differentiated from various types of primary ovarian tumors, metastatic mucinous tumors and rare nonneoplastic histiocytic lesions. Endometrioid Adenocarcinomas with areas of mucinous metaplasia is one differential, though this tumor secretes a large amount of mucin into the lamina of the gland and cyst. Another differential is Heterologous Sertoli-Leydig Cell Tumors (SLCTs) which grossly appear like mucinous cystic tumors but microscopically there is abundant sex cord like structures between the cyst and elements like mesenchymal tissue may also be present.^[4]

This case is presented due to its rarity.

CONCLUSION

Based on gross examination, histopathological examination and clinico-radiological correlation, a diagnosis of Mucinous Cystadenocarcinoma of Ovary with omental metastasis, Stage IIIA2 was established in a 19 year old.

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