



**MUCINOUS ADENOCARCINOMA OF THE INTESTINAL TYPE ARISING FROM
MATURE CYSTIC TERATOMA OF THE OVARY: A RARE CASE REPORT**

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ABSTRACT

Malignant transformation associated with mature cystic teratoma (MCT) is uncommon. The most common malignant tumor is squamous cell carcinoma. Adenocarcinoma arising in MCT is extremely rare. A 19-year old female presented with lower abdominal fullness and diffuse tenderness. On laparotomy, a huge ovarian mass on the left side with cystic degeneration was found and left oophorectomy was performed. On histopathological examination it was mature cystic teratoma with intestinal type of adenocarcinoma, which is an uncommon entity.

KEYWORDS: Mature cystic teratoma, Malignant transformation, Intestinal type, Adenocarcinoma.

INTRODUCTION

Mature cystic teratomas (MCTs) of the ovary are benign ovarian tumors, which are derived from germ cells and represent 15% to more than 50% of all primary ovarian neoplasms.^[1-5] Malignant transformation of a benign mature cystic teratoma is a much rarer occurrence with an estimated rate of incidence of 1.8 to 2% in such lesions(5), which occurs in relatively older women. Results have shown that 85 to 90% of the malignant tumors are squamous cell carcinomas.^[1-7] Adenocarcinomas and sarcomas follow in frequency, but the adenocarcinoma associated with MCT is extremely rare.^[1,5] In this report, we describe a case of adenocarcinoma arising from the epithelial elements of a mature cystic teratoma of the ovary.

CASE REPORT

A 19-year-old female presented with the complaints of fullness and diffuse vague pain in the lower abdomen. The patient underwent exploratory laparotomy and found a mass originating from the left ovary, measuring 27x20x8 cm in diameter, with a smooth external surface. The tumor was removed and sent for pathological examination.

On gross examination tumor measuring 27x20x8 cm. cut section is multi cystic, with solid areas. Cystic areas are filled with serous, mucinous and hemorrhagic material. In addition, tan yellow sebaceous material and tuft of hair also present. Extensive areas of necrosis are also seen.

On microscopic examination areas of intestinal type of mucinous epithelia cells proliferation with malignant

transformation and stromal invasion were seen. other areas showing cyst lined by stratified squamous epithelium and sebaceous material.



Figure-1 Cut section - multilocular cyst with mucinous material and a small cystic area (at arrow) showing hair and sebaceous material (inset).

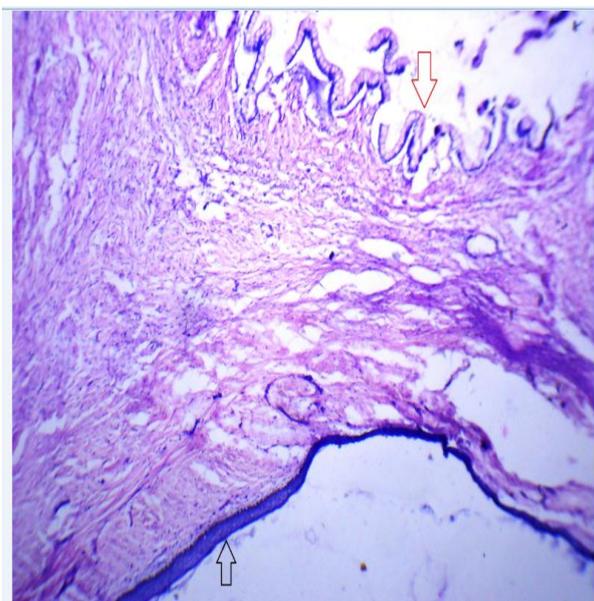


Figure-2 Showing mucinous type of epithelium[red arrow] and stratified squamous epithelium[black arrow] (H&E 100X).

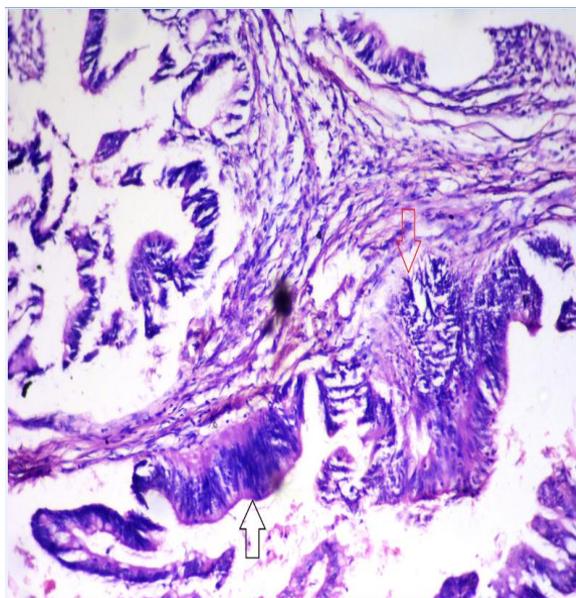


Figure-3 Areas of intestinal type of mucinous epithelia cells proliferation and stratification [black arrow] along with stromal invasion [red arrow] (H & E 100X).

DISCUSSION

Mature cystic teratomas are derived from germ cells and represent 15% to more than 50% of all primary ovarian neoplasms.^[1-3,8] MCTs usually have benign characteristics. The totipotent mature cystic teratoma may be derivable to any type of malignant transformation or a combination of malignancies.^[1-3] Secondary malignant transformation arise from MCT, such as distinct carcinomas or harbor adult-type cancers develop, are uncommon occurrences. It has been estimated that MCTs occur in less than 2% of all such lesions.^[1-4] There are many kinds of histological changes

that may occur and SCC is the most common malignant type. Nearly 75% of malignancies arising in MCTs are invasive or in rare cases in situ SCC.^{[1-4],[7-9]} Tumors may be adherent to the surrounding structures or may present focal areas of nodularity, mural thickening, hemorrhage, or extensive necrosis. Adenocarcinomas associated with MCTs are extremely rare in the ovary.^[1,3,4] They are the second most common malignancies arising in dermoid cysts.^[10] Adenocarcinomas occur with a frequency at around 6.8% and only one of which intestinal type was very rare.^[1,3-5,10] The distinctive characteristics of focal mucinproduction suggested that adenocarcinoma features may be similar to the intestinal epithelium type.

MCTs usually develop in children or women during their reproductive age group but sometimes the MCTs are not detected until years after menopause. Rare tumors are hereditary.^[8]

Moreover, malignant transformation of MCTs usually occurs in older or postmenopausal women.

Patients with MCTs or with malignant transformation typically have initial symptoms of pelvic mass. The tumors may undergo torsion or rupture that cause acute abdominal pain. The average age of cases was 55 years old and the only symptom or sign represented was abdominal mass, except when the tumor had extended through the cyst wall. Right and left ovaries were involved with equal frequency.^[4] In conclusion, we present a patient with a huge pelvic mass and demonstrated a well-differentiated intestinal type of adenocarcinoma within a mature cystic teratoma of the ovary.

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