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Original Research Paper

Medical Science

MALIGNANT TERATOMA OF OVARY

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ABSTRACT Malignant teratoma of is an uncommon tumor, comprising less than 1% of teratoma of ovary. Malignant teratoma has a specific age incidence, occurring most commonly in first 2 decades of life and present with unilateral ovarian mass. It is uncommon after menopause. Malignant teratoma is about 3% of teratoma, 1% of all ovarian tumor and 20% of malignant germ cell tumors. I am presenting a case of 13 years old female with unilateral ovarian mass.

KEYWORDS : Malignant teratoma, Ovary, Gross pathology, Histopathology.

CASE PRESENTATION:

A 13 years old female presented with abdominal pain and distension for 6 months. On pelvic examination unilateral lower abdominal mass was palpated which was soft, cystic and fixed to underlying structure. On bimanual examination, the mass was arising from Rt ovary which was soft and cystic. Provisional diagnosis of ovarian mass was made. All necessary biochemical investigations were done, but no remarkable results were found.

USG showed unilateral Rt sided ovarian mass which was solid mass with cystic component measuring 18x10x 3 cm.

CECT of lower abdomen showed a large well defined lobulated heterogenus enhancing lesion with prominent solid component Rt side of the pelvis arising from ovary with moderate ascitis.

Surgical excision of mass was planned. Total abdominal hysterectomy with Rt sided salpingoopherectomy was done under general anaesthesia. Pelvic and paraaortic lymph node along with a part of omentum was removed.

On gross pathological examination, the mass has outer smooth surface, soft to firm in consistency, greyish white in colour with few foci of haemorrhages and necrosis.

Cut section showed multiple cysts filled with mucous material with few solid areas. Some foci of haemorrhages and necrosis are also seen.

INTRODUCTION;

Teratoma are germ cell tumors that arise from totipotent primitive germ cells. Teratomas are composed of tissue derived from two or three germ cell layers. Teratomas are two types.

Mature teratoma- if they contain differentiated tissue.

Immature teratoma- if they contain immature tissue.

DISCUSSION;

Immature teratoma of ovary is uncommon tumor. It is about 3% of all teratoma, 1% of all ovarian tumors and 20% of malignant germ cell tumors. Immature teratoma occurs predominantly in children and young women. The clinical presentation is nonspecific. Patients complain of pelvic or abdominal pain, abdominal swelling, or a palpable abdominal mass. Ectodermal and mesodermal derivatives typically predominate among theimmatureelements. Immature neuroectodermal elements are the easiest immaturetissues to recognize and quantitate. These include sheets of mitotically active immature neuroepithelial cells, tubules lined by columnar embryonal cells with stratified hyperchromatic nuclei, sheets and nests of neuroblasts containing anuclear fibrillary zones and Homer Wright rosettes, mitotically active immature glia, and primitive retina. Immature mesenchymal stroma is hypercellular and composed of small spindle cells with dark nuclei. Mitotic figures are usually present. Cartilage is often present in immature teratoma. Immatureendodermal tissues are less common. The types of immature endodermal structuresthat can be seen include primitive glands lined by columnar cells with subnuclear and supranuclear vacuoles, partially differentiated stratified columnar intestinal epithelium with goblet cells, and islands of embryonal liver tissue.

	HistologicGrading of Immature Teratoma	
Grade	Immature Tissue	Amount of Neuroepithelium
0	Absent	None
1	+	Rare, not >1 lpf/slide
2	++	Common, not >3 lpf/slide
3	+++	Prominent, ≥4 lpf/slide
(lpf, Low-power field)		

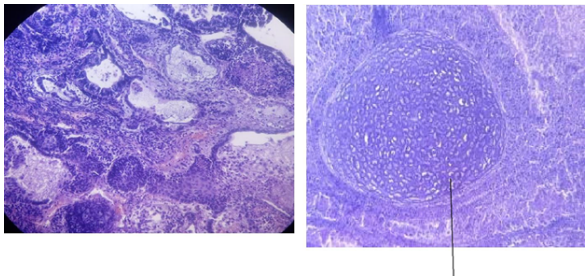
Most (50%-80%) patients have localized tumors (stage I) at diagnosis. Immature teratoma spreads mainly by implantation on the pelvic and abdominal peritoneum and the omentum. Patients with stage IA, grade 1 immature teratoma have an excellent prognosis and are treated by surgery alone. Those who have advanced disease usually receive postoperative chemotherapy.

CONCLUSION:

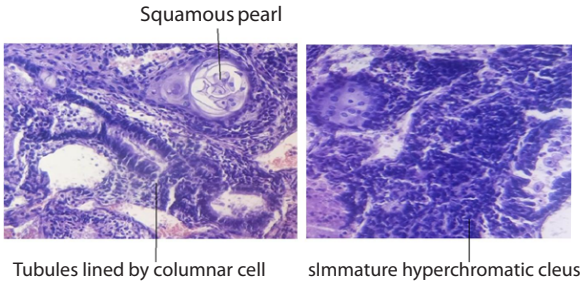
The case is being reported for its rarity. Ectodermal and mesodermal derivatives are typically prominent among the immature elements. Most of the patients have localized tumors (stage 1) at the diagnosis. Patients with localized (stage IA) tumors are treated by unilateral salpingo-oophorectomy. Those who have advanced disease usually receive postoperative chemotherapy.

SLIDE DESCRIPTION

Sheets of immature neuroepithelial cells, tubules lined by columnar embryonal cells having stratification and hyperchromatic nucleus, immature chondrocytes, few squamous pearl and areas of necrosis.



Immature chondrocytes


Squamous pearl
Tubules lined by columnar cell
sImmature hyperchromatic cleus