CASE REPORT

A RARE CASE REPORT OF YOLK SAC TUMOR

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ABSTRACT:

Yolk sac tumor also known as endodermal sinus tumor is a rare malignant tumor that usually occurs in second decade of life. We report a case of yolk sac tumor which occurred in 13 year old girl. She presented with lower abdominal pain for about one month. Ultrasound findings revealed a large multilocular mixed solid cystic mass lesion with internal septations .doppler study reveals internal vascularity in mass lesion.CECT scan of abdomen and pelvis revealed large mixed density enhancing mass lesion arising from pelvis. Her pathology report revealed yolk sac tumor of the ovary.

INTRODUCTION:

- Yolk sac tumor, also known as Endodermal sinus tumor is a rare malignant ovarian tumor that usually occurs in the second decade of life. Yolk sac tumor (YSTs) can be seen in males and females, involving the testis, ovary, and other sites, such as the mediastinum.
- Ovarian germ cell tumors arise from primordial germ cell derived from the embryonal gonads. Malignant germ cell tumor comprise less than 5% of all ovarian neoplasms. The incidence range from 1 to 6% in west and from 8 to 19% in Asia [1]. The most common form of malignant germ cell tumors are dysgerminoma (80%), Yolk sac tumor (EST) (70%), and immature teratoma .
- Embryonal carcinoma, choriocarcinoma and polyembryoma are very rare type of germ cell tumour. Malignant mixed germ cell tumor is a type of tumour that consists of two or more malignant germ cell component. Most common combination reported is dysgerminoma and EST and rarest component include embryonal carcinoma and immature terotoma. Tumour markers such as AFP, hCG and LDH contribute to the diagnosis, prognosis and follow-up of the disease. We report a rare case of mixed germ cell tumour with yolk sac component.

CASE REPORT:

- A 13 year old girl presented with chief complaint of abdominal distension since one month. Her menstrual history revealed that she had experienced menarche at the age of 12 and her cycles were regular. Her physical examination and vital signs are normal. On abdominal examination a huge mass up to the level of xiphisternum was palpated. There was no guarding or rebound tenderness.

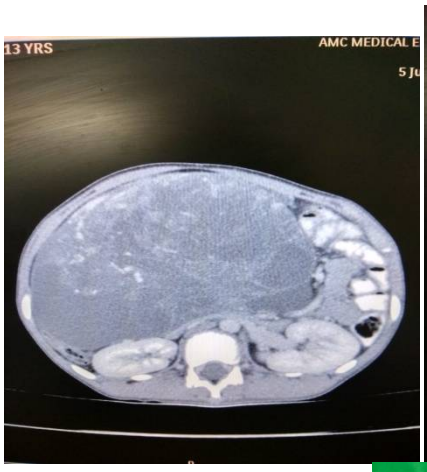
MATERIALS & METHODS:

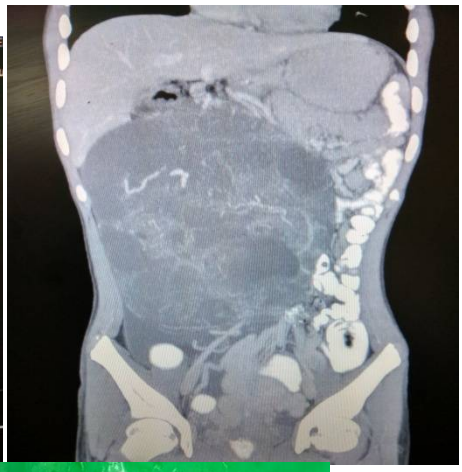
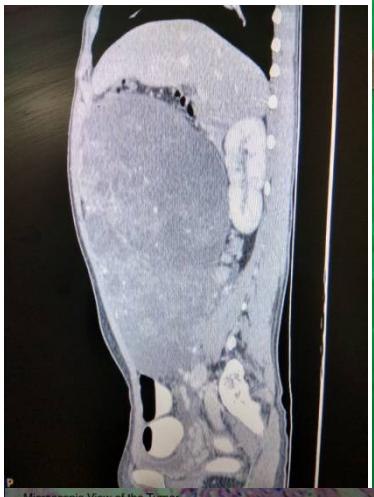
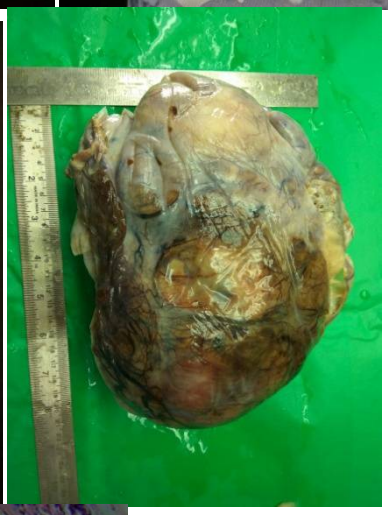
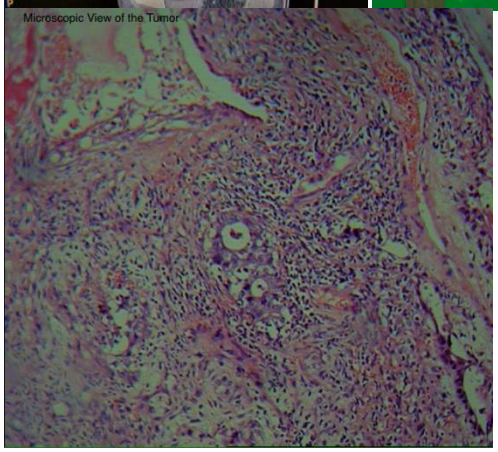
As the Girl presented with abdominal distenstion & abdominal pain like symptoms, She underwent hematological studies & radioimaging in form of Chest x-ray & USG Abdomen & pelvis ,CECT Abdomen & Pelvis.

- Routine blood reports and serum biochemistry was normal.
- On ultrasound, a large well defined mixed echogenic predominantly cystic lesion with internal septations and intervening solid areas was noted arising from pelvis extending from the

hypogastrium to epigastric region. The lesion showed intervening vascularity on colour Doppler study. Right ovary was not visualised separately from the lesion.Uterus and left ovary appeared normal.

- On CECT scan study of abdomen and pelvis ,there was evidence of a 22 x 15 x 20 cm sized large, well defined cystic lesion arising from pelvis to epigatric region and extending from right hypochondrium to right iliac fossa and & crosses midline. The lesion show multiple enhancing septations and enhancing solid components within it on post contrast study. Right ovary was not visualised separately from the lesion.Uterus and left ovary appeared normal. P/o ovarian cystic mass lesion was noted
- Intraoperatively there was a huge mass arising from right sided ovary with intact capsule. There was no free fluid in the abdominal cavity. Abdominal cavity was explored and there was no evidence of malignant disease elsewhere. Left sided ovary and uterus was normal looking. Tumour was removed and biopsy was taken from right ovary.
- On Histopathology, mixed malignant germ cell tumor wiyh predominat yolk sac component was confirmed.

- 

DISSCUSSION:

- Yolk sac tumor is the second most common malignant germ cell tumour of ovary in children,accounting for 9-16% of pediatric ovarian tumour. The peak incidence of endodermal sinus tumour of ovary is during the second decade of life,with a median age of 19 years.
- Abdominal pain is most common presenting complain and most patients have a palpable abdominal & pelvic mass. Because this tumour grows rapidly,the duration of symptoms usually only 1-4 weeks. Occaisonally the patients presents with acute abdominal pain due to torsion or ovarian rupture. Because increased levels of serum alfa fetoprotein are found in patients with

Yolk sac tumor of the ovary. Serum alfa feto protein is used as a tumour marker when evaluating response of treatment.

- Differential diagnosis include Cystic teratoma,Tuboovarian mass,Mesenteric cyst,Gastrointestinal duplication cyst.
- Most yolk sac tumors of ovary are unilateral with no more than 1% of cases being bilateral.and large,measuring between 10 cm and 30 cm. The typical neoplasm manifests as a large complex pelvic mass that extends into the abdomen. The yolk sac tumor is often characterized by extremely rapid growth and extensive intraabdominal spreading with poor prognosis. The cystic areas are composed of epithelial line cysts produced by the tumor or with coexisting mature teratomas.(1) Affected patients can be diagnosed by elevated serumα-fetoprotein (AFP) and lactate dehydrogenase (LDH) levels.(1,2) However, reports of preoperative diagnosis of endodermal sinus tumor in an adolescent by combining images from ultrasound , contrast enhanced CT scan of abdomen and pelvis and magnetic resonance imaging (MRI) as well as AFP determination are rare.(1,2).
- Yolk sac tumor of the ovary are aggressive tumours that until recently were fatal in approximately 85% cases with more than 90% patients dying within 2years of diagnosis. Today,surgery and aggressive combinations of chemotherapy make it poosible to achieve survival on over 80% of patients with stage 1 tumours.(3,4)
- Because of rapid growth of this tumor a delay in diagnosis and subsequent treatment may harm the patients and sharply reduce chances of survival especially in patients with advanced disease. There fore,this entity should be considered and serum alfa feto protein levels obtained early when girls or young women present with large complex or predominatly cystic pelvic mass.

CONCLUSION

Although rare, pubertal young female patients with complains of abdominal distension and pain which show large complex or predominatly cystic pelvic mass on ulatrasonography and CECT study. P/o yolk sac tumor should be taken into consideration.

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