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AN UNUSUAL PRESENTATION OF RETROPERITONEAL TUMOR

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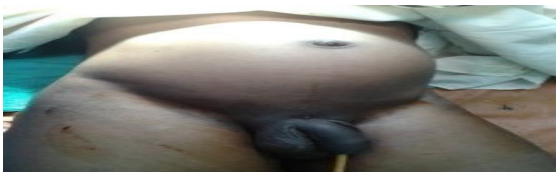
Abstract : Retroperitoneal teratoma is a rare entity in adults. We describe a case of 20year old male presented to us with abdominal distension for 2 years. Radiology work up disclosed a retroperitoneal mass suggestive of teratoma. Laparotomy and excision of the tumor was done. Histopathology revealed BENIGN CYSTIC TERATOMA.
Keyword :RETROPERITONEUM, BENIGN CYSTIC TERATOMA

CASE REPORT :

20 year old male complaints of abdominal distension for 2 year duration, insidious onset, progressive not associated with other symptoms. No H/o bowel and bladder disturbances. H/o ultrasound guided aspiration done 1 ½ years back for which details not available. On examination Patient general condition was normal. Other system examinations were normal. Per abdominal examination revealed lower abdominal distension; Swelling of size 20*15cm is confined to the umbilicus, left and right lumbar region;Size decreased on leg raising test. No hepatosplenomegaly. Per rectal examination no abnormality detected.

Fig 1. Clinical picture showing distended abdomen



Complete Hemogram was normal. Renal function test was elevated. Liver function test normal.Chest X ray normal. Ultrasound showed large welldefined hypoechoeic cystic lesion with solid component and internal septations: 12*9cm cystic component, 7*6cm solid component.

CECT ABDOMEN showed A large cyst with internal solid components arising from retroperitoneum and pelvis possibility of pelvic teratoma of unknown origin. Alpha feto protein, Serum Lactate Dehydrogenase,and Beta HCG are within normal limits.

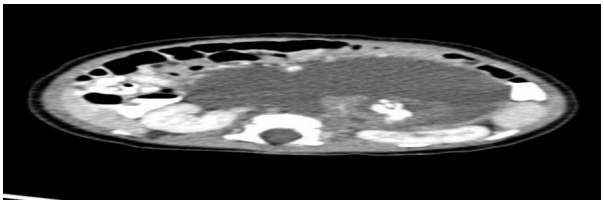


Fig 2. CECT Abdomen showing Complex RetroPeritoneal cyst

Prior to surgery left Ureteric stent placement done

EXPLORATORY LAPAROTOMY : By midline laparotomy ,a 25*20 cm size swelling adherent to posterior surface of urinary bladder was identified; Bowels were pushed up.As there was difficulty in delievering the tumor,left lateral extension of incision made. After careful dissection, mass separated without injuring the bladder.

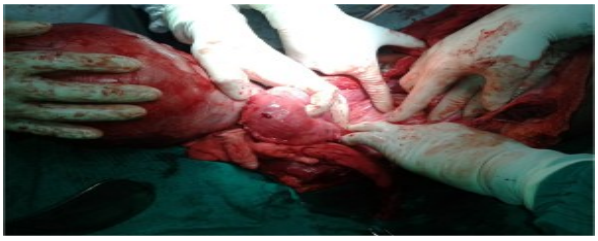
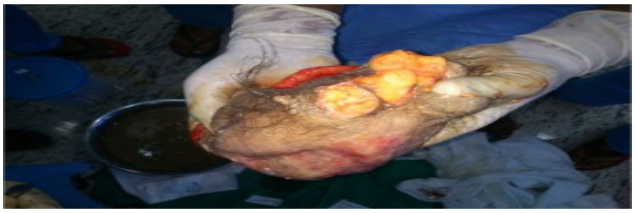
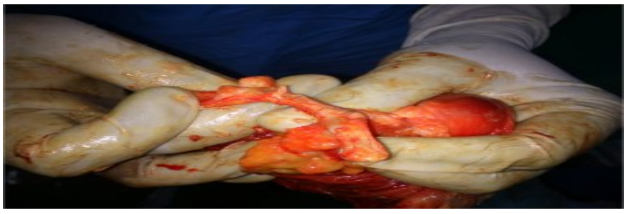


Fig 3. Retroperitoneal cyst adherent to the bladder being removed.

Fig 4. Cut section of the cyst showing Fat, Skin elements.(1litre of sebum) Fig 5. Bony elements in the tumor





HISTO PATHOLOGY : revealed cyst wall – lined by stratified squamous epithelium with underlyingdermal appendages and subcutaneous fat,Mature neural tissues, ganglion cells, area of bony trabeculae and marrow elements,Pseudostratified ciliated columnarepithelium, cartilage and mucosal glands are also seen.No immature elements; suggestive of BENIGN CYSTIC TERATOMA**.**

Fig 6. Hair follicle & Neural tissues in the tumor

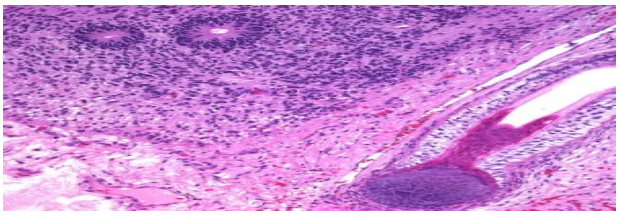
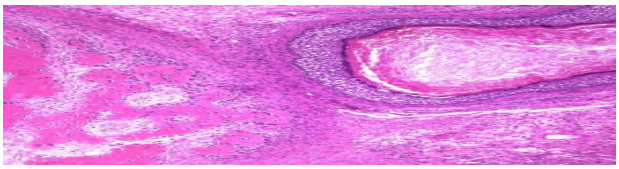
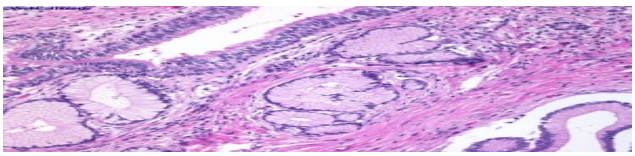


Fig 7. Skin & Bony elements in the tumor

Fig 8. Respiratory elements in the tumor





DISCUSSION :

Retroperitoneal teratomas constitute less than 10% of all primary retroperitoneal tumours [2].They are rare in adults. Less than 20% of these patientsdevelop tumours over the age of 30 years. They usually occur more in children.Approximately half of the cases are found in the first decade of life. The incidence of retroperitoneal teratoma in females is twice that in males [3]. Teratomas arisefrom germ cells that fail to mature normally in the gonadal locations. These totipotent cells can differentiate into tissue components representing derivatives ofmesoderm, ectoderm and endoderm [2].

The distribution of teratomas are described in order of decreasing frequency: in the ovaries,the testes, the anterior mediastinum, the retroperitoneal space, the presacral and coccygeal areas, pineal and other intracranial sites, the neck and abdominal viscera other than the gonads [1]. The migratory property of germ cells would explain teratomas in these extragonadal sites, which generally occur alongmidline structures [2].

Retroperitoneal teratomas are often located near the upper pole of the kidney, withpreponderance on the left side [1]. Retroperitoneal teratomas are usually asymptomatic. When compression of the surrounding structures occurs, patients mayhave abdominal distension and pain, nausea and vomiting [2]. Malignant teratomas tend to progress rapidly [3]. Malignant change in teratomas was higher inadults than in children, with incidences of 26% and 10%,respectively [1, 7]. Malignant teratomas may cause a rise in serum AFP [8].

The differential diagnosis of retroperitoneal teratomas include ovarian tumours, renal cysts,adrenal tumours, retroperitoneal fibromas, sarcomas,haemangiomas, xanthogranulomas, enlarged lymph nodes and perirenal abscesses [3, 9].Scholz et al suggested that a high percentage of extragonadal germcell tumours have signs of burned out or active tumour in the testis. However, it was not so inour case [15].

Plain abdominal radiograph always shows a soft tissue mass. Calcifications appear in 53–62%of teratoma cases and are useful for the pre-operative diagnosis. It may be within the tumour or on the rim of the cyst wall [2, 3, 7]. Even though 74%of benign teratomas contain calcification, they also occur in 25% of malignant teratomas.

Ultrasound can identify the cystic, solid or complex components of the tumour. The acousticshadow induced by calcification in the teratoma, and occasionally fat-fluid levels, are described [10]. The cystic portion may containsebum, non-fat fluid and structures resembling fetal parts. Fluid may fill the dependent portion of the tumour producing a fat–fluid interface with the sebum. Ultrasound does not permit definite differentiation among the fat, other forms of soft tissue and calcific deposits [10].

CT gives more specific information on the fat, proteinaceous fluid and calcification using the Hounsfield values determination. The presence of fattyportions of the tumour in the horizontal interface with dependant fluid, which probablyrepresents sebum, is virtually pathognomon of a teratoma [8, 10]. CT is better than ultrasound at defining the teratomas extent to the surrounding organs and inevaluating the cyst wall [10].

MRI with coronal and sagittal scans are superior to ultrasound and CT for demonstrating the anatomical relationship with adjacent organs such as abdominal aorta or spinal cord and local tumour spread [11, 12]. In addition, MRI is unable to show calcification, but it can distinguish fluid, fat, calcium and soft tissue elements, and predict resectability and evaluate recurrence [13].

Angiography can detect the blood supply and the presence of hypervascularity, arterial encasement and organ invasion, often suggesting malignancy [14]. Macroscopically, teratomas can be divided into either cystic or solid. Cystic teratomas are mostly benign, containing sebaceous materials and mature tissue types. On the other hand, solid teratomas are usually malignant and composed of immature embryonic tissues in addition to adipose, cartilaginous, fibrous and bony components[7].

Prognosis is excellent in benign Retroperitoneal teratoma if complete resection can be accomplished. Malignant teratoma usually recur despite surgical intervention with maximum duration of one and half years.

CONCLUSION : Retroperitoneal teratoma is a rare entity. We describe herein a 20 year old male found to have Retroperitoneal teratoma diagnosed by imaging. The tumor was resected and Histopathology examination confirmed the diagnosis of BENIGN RETROPERITONEAL TERATOMA.

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