Mature Cystic Teratoma in Pediatric: A Case Report

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***Abstract*- Teratomas are neoplasms that arise from pluripotent cells and can differentiate along one or more embryonic germ lines. Renal teratoma is an exceedingly rare condition. Teratomas commonly arise in the gonads, sacrococcygeal region, pineal gland, and retroperitoneum. Renal teratoma is extremely rare. We report the main radiological features of an unusual case of mature cystic teratoma arising from the right renal in a three-year-old girl. The right-sided abdominal mass was detected on physical examination and ultrasonography revealed a heterogeneous mass with a central cystic component. A nephrectomy was performed and a large, pus-filled mass and a solid portion arising from the right renal was excised. The last pathological diagnosis was confirmed as a mature cystic teratoma.**

Keywords: **teratoma, renal, children.**

INTRODUCTION

Renal teratoma is a very rare germline tumor, which rarely originates from one or more embryonic germ cell layers. [2] The incidence of renal teratoma is very low. These clinical findings and patient experiences suggest appropriate and practical measures when treating such cases.

METHODS

This is case report in a secondary care center. Patient was cohortly followed up in terms of diagnosis and treatment.

CASE DESCRIPTION

A three-year-old girl, without a history of hematuria, pyuria, fever, anorexia or vomiting, abdominal pain, found a mass in the right abdomen for approximately two years, the only complaint felt was that she had difficulty gaining weight, body weight 13 kg, On physical examination of the abdomen, there was a solid mass occupying the RUQ and RLQ, no tenderness, mobility with respiration and irregular margins. Chest X-rays found no abnormalities. CT-scan showed that the right renal was enlarged with widening of the pelvicocalises, an opaque stone appeared in the pelvis with a size of 26,44 x 25,14 mm (Fig. 1).. Meanwhile, no abnormalities were found in the left renal.

The patient was operated on by laparotomy. A very large mass (about 14 x 9 x 11 cm) found at the upper pole of the right renal, consists of a solid, cystic structure. (Fig. 2). The patient is experiencing a good recovery after surgery. Postoperative histopathological examination confirmed that the stroma consisted of various elements of mature tissue including skin adnexa (Fig. 3), brain / nerve (Fig. 4), fat, muscle, bone and gastrointestinal epithelium (Fig. 5). Our pathological findings are therefore consistent with mature teratomas of the renal.

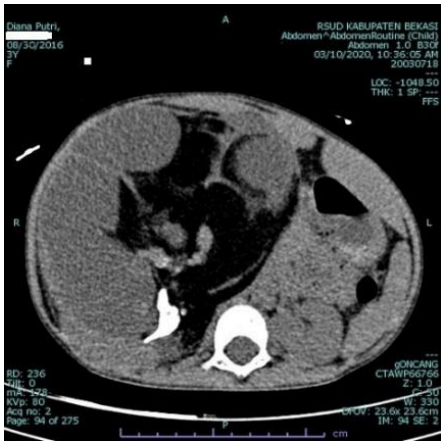

Fig. 1 Computed Tomography Scan examination of right hydronephrosis e.c nephrolithiasis

Fig. 2 Gross view of lesion shows measuring 14 x 9 x 11 cm, chewy, on the cystic cleavage with hairy walls filled with brown liquid and partly solid whitish yellow with hard parts (bones)

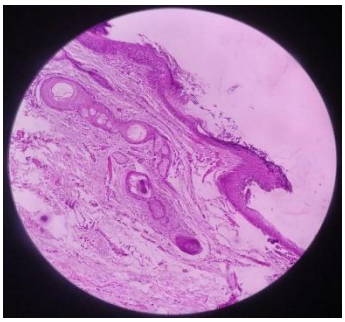

Fig. 3 Mature tissue includes skin adnexes, Original magnification ×100 (H&E)

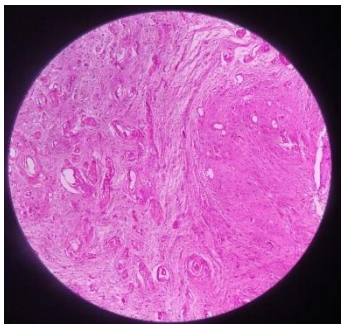

Fig. 4 Brain / nerve tissue. Original magnification ×100 (H&E)

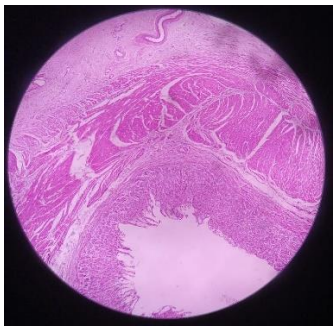

Fig. 5 Digestive fatty tissue, muscle, bone and epithelium. Original magnification × 40 (H&E)

DISCUSSION

Teratoma and other germ cell tumors rarely occur in the kidneys. [1] They present mainly as an abdominal mass with few other symptoms. The diagnostic algorithm was palpation of a solid flank mass, in our case it was a pelvic mass, CT-scan was used to define the extent of the disease in lesions occupying both sides of the retroperitoneum and those tumors where calcification is not seen on plain X-ray. In the above case, a patient with a CT-scan showed that there was hydronephrosis with a suspicion of renal stones in the right pelvis. [3] the differential diagnosis of renal teratoma in this case was more towards the cause of hydronephrosis in children, the most common differential diagnosis of congenital abnormalities is urethropelvico junctional.[5]

Obstruction with a CT-scan shows widening of the pelviocalyceal system of the left renal with a calyx clubbing tip, with narrowing of the pelvioureteric junction, the second differential diagnosis is Wilms Tumor with CT-scan shows a hypoattenuation mixture image surrounded by tissue such as a raised capsule, covering necrotic and cystic areas, the third differential diagnosis is mesoblastic nephroma, with a CT-scan showing a solid mass with regular contours that slightly warmed by contrast.[4]

For the recommended therapy is excision of the tumor mass, and histological examination is very important to make the diagnosis.

CONCLUSION

Renal teratoma is a very rare case in children, it should be considered in the differential diagnosis of any renal mass abnormality in childhood.

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