Primary Retroperitoneal Teratoma: A Case Report and review of literature

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ABSTRACT

Introduction: Teratomas are considered to be congenital tumors composed of different somatic tissues, arising from pluipotential embryonal cells. The order of frequency of teratoma localization is ovarian, testicular, and anterior mediastinal, with retroperitoneal localization occurring least of all. **Case report:** Here we had reported a case of primary retroperitoneal teratoma in infant. **Conclusion:** Teratoma should be a part of differentials of retroperitoneal mass in infants. In the management of teratomas, the goal of therapy is complete surgical removal of the tumor. If contiguous spread has not occurred, the cure rate of retroperitoneal teratomas is high.

Keywords: infant, retroperitoneal teratoma, Teratoma

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INTRODUCTION

Teratomas are comprised of tissue from all three embryonic germ layers, although one cell type may predominate. A primary retroperitoneal teratoma is a relatively rare disease. The incidence of teratoma is reported to be 6% to 11% of primary retroperitoneal tumors, with 60% occurring in children less than 15 years old, 70% of which occur in infants.[1] Here we presented a case of primary retroperitoneal teratoma in infant.

CASE REPORT

9 months old female child admitted to pediatric department with complain of fullnesss and tender abdomen. On physical examination, the infant appeared well nourished and healthy. Weight was 22 kg. There were no signs of dehydration, anaemia or jaundice. The abdomen appeared slightly distended in the left upper quadrant,

and in this region, extending across the midline, a firm; immobile, circumscribed mass was palpable. The liver could be separately palpated a finger's breadth below the costal margin. Bowel sounds were increased. Rectal examination was negative.

Abdominal ultrasonography showed normally situated and functioning kidneys. Further postero-anterior and lateral views demonstrated a chain of solid calcification in this region. While exact interpretation was not possible at this time, the presence of this calcification appeared to favour the diagnosis of retroperitoneal teratoma. Hematological and biochemical tests were normal limits.

Laparotomy was performed through a right paramedian incision and revealed a retroperitoneal tumor approximately 9.5x8x4 cms lying somewhat to the left of the midline. The mass excised and sent to our pathology department for histological examination. Grossly, mass showed grey white areas with tooth formation (Figure 1).

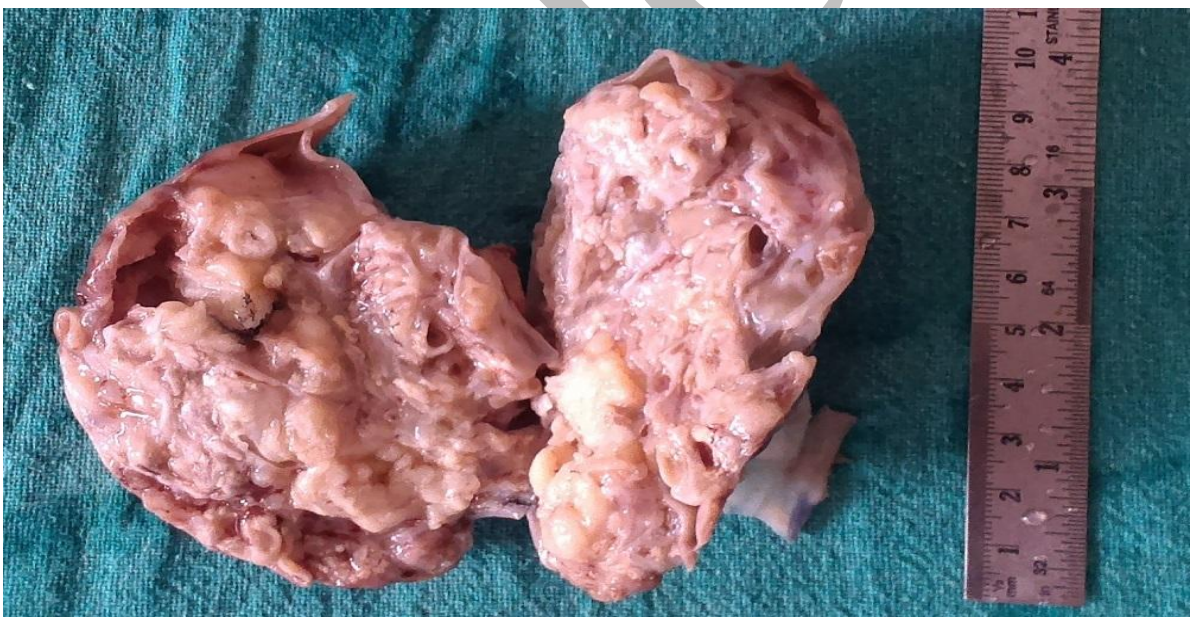

Figure 1: Gross appearance of Teratoma.

Sections prepared from representative areas showed heterogeneous arrangement of a variety of tissues and cells, including fat, cartilage, intestinal mucosa, glands and nerve fibres (Figure 2, 3). The appearances were typical of a mature teratoma.

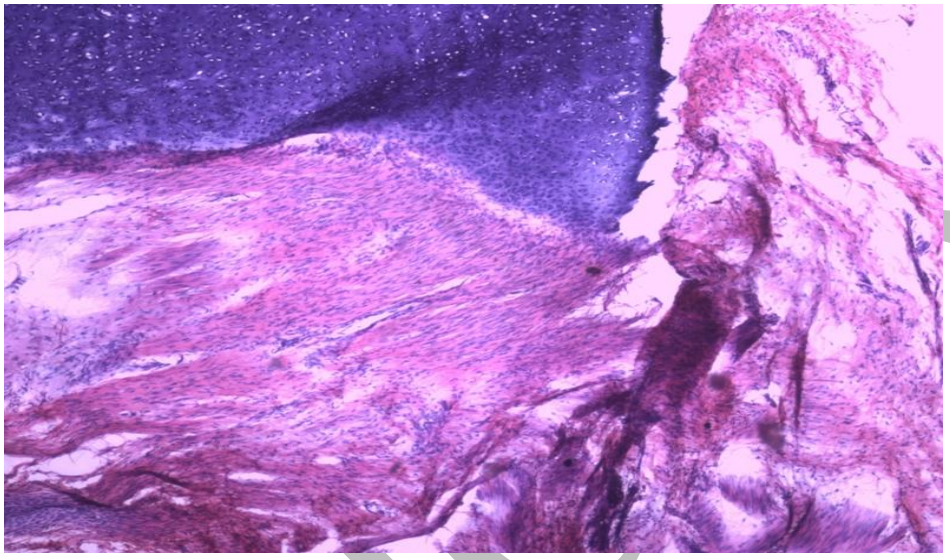

Figure 2: Photomicrograph showing cartilage and neural tissue.

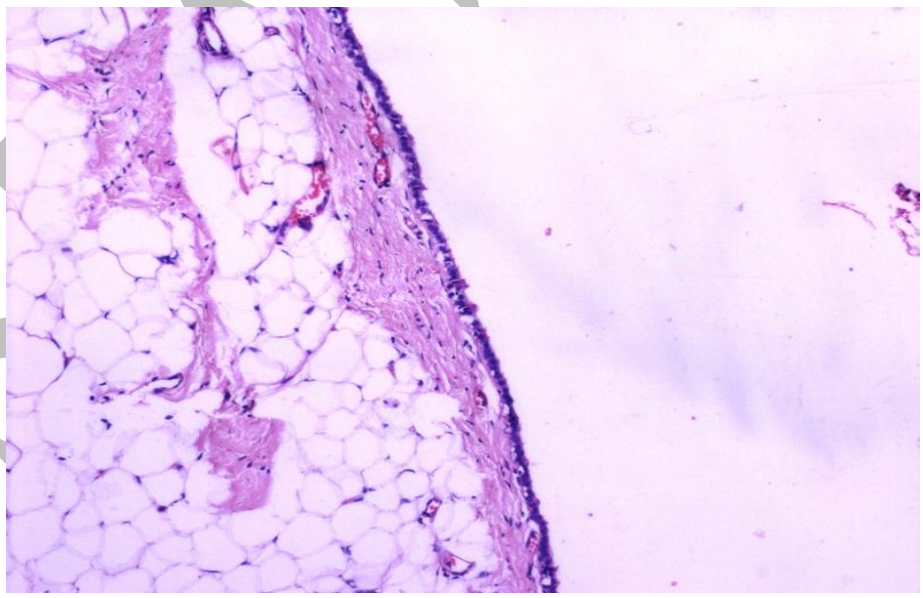

Figure 3: Photomicrograph showing fibroadipose, fibrocollagenous and lining epithelium (cuboidal type).

DISCUSSION

Teratomas are considered to be congenital tumors composed of different somatic tissues, arising from pluipotential embryonal cells. They are uncommon in patients over 30 yr of age. The order of frequency of teratoma localization is ovarian, testicular, and anterior mediastinal, with retroperitoneal localization occurring least of all.[1]

Retroperitoneal teratomas comprise 3.5-4% of all germ cell tumors in children. Patients present with abdominal distension or a palpable mass. Occasionally, the tumor is present antenatally and diagnosed at birth, these neonatal teratomas have a higher incidence of malignancy than those in older children.[2-4]

The clinical symptoms of teratomas are few; teratomas often develop asymptomatically, as the retroperitoneal space is extensive enough to allow for their free growth. Rarely an acute syndrome occurs, involving peritonitis, intestinal obstruction, or renal colic.

An accurate diagnosis of a teratoma cannot be made on a clinical basis. Radiographic manifestations of teratomas include the presence of calcifications, teeth, or fat. Calcification of the rim of the tumor is seen in 53% to 62% of teratoma cases, and the presence of calcification is often useful for a preoperative diagnosis. However, calcification cannot be considered an indicator of a benign tumor since 12.5% of calcified tumors are malignant. A pyelogram should be performed and may demonstrate some of the following features: renal and/or ureteric displacement, urinary stasis, and, finally, bladder compression.[1, 5]

Microscopically, teratomas are of 2 types: (a) cystic teratomas, usually benign, containing yellowish liquid and material resembling hair, and composed of fully developed tissue; and (b) solid teratomas, generally malignant, having a varied aspect, formed of fibrous, fatty, cartilaginous and bone tissue, and consisting of immature embryonic tissue.[1]

CONCLUSION

Teratoma should be a part of differentials of retroperitoneal mass in infants. In the management of teratomas, the goal of therapy is complete surgical removal of the tumor. If contiguous spread has not occurred, the cure rate of retroperitoneal

teratomas is high. In benign cases, the tumor can usually be excised, and a good prognosis may be expected. However, as it is possible that histologically mature tumors may take a malignant clinical course, careful follow-up is necessary in these patients.[1]

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