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CASE REPORT

Immature Mesenteric Teratoma In An Infant: A Case Report

JYOTI SRIVASTAVA* AND RAJENDRA K GHRITLAHAREY**

ABSTRACT

We report a case of a large mature teratoma with rare microscopic foci of the immature elements of the mesentery of the jejunum and ileum, which were diagnosed by histology in an infant. She presented with an abdominal lump since birth. Her clinical examination revealed a non tender, mobile, mass, occupying the right hypochondrium and the epigastric and the umbilical areas. USG and CT scan of the abdomen confirmed a heterogeneous mass of a size of 10 x 8 x 6 cm, with calcification seen in the intra peritoneum and displacing the intestinal loops to the left side. Exploratory laparotomy and complete excision of the tumour was done from the mesentery of the jejunum and the ileum. She was advised chemotherapy, as the biopsy was having immature elements and her serum alpha foetoprotein levels were markedly raised, but her parents refused chemotherapy. She is on regular follow up and is doing well.

KEY WORDS: Teratoma, Mesenteric teratoma, abdominal tumour, Calcification,

*(M S), M Ch student, **M S, M. Ch., FAIS 2, Associate Professor, Department of Paediatric Surgery, Gandhi Medical College & Associated, Kamla Nehru & Hamidia Hospitals Bhopal, Madhya Pradesh 462 001 (INDIA)

Corresponding Author:
Dr Rajendra K Ghritlaharey
Associate Professor, Department of Paediatric Surgery,
Gandhi Medical College & Associated Kamla Nehru & Hamidia Hospitals
Bhopal, Madhya Pradesh 462 001 (INDIA)
Phone No: + 91-755 - 4050571(R), 4050261(O)
E-mail: drrajendrak1@rediffmail.com

INTRODUCTION

The common location of teratomas in children are; the sacroccocygeal, mediastinal, retroperitoneal and the gonadal organs, etc [1], [2]. The occurrence of extra gonadal, intraperitoneal teratoma in infants and children, especially those arising from the mesentry and the mesocolon, are very rare [2], [3], [4], [5], [6], [7]. Herein, we are reporting a one month girl with mesenteric mature teratoma, with rare immature elements and a brief review of literature.

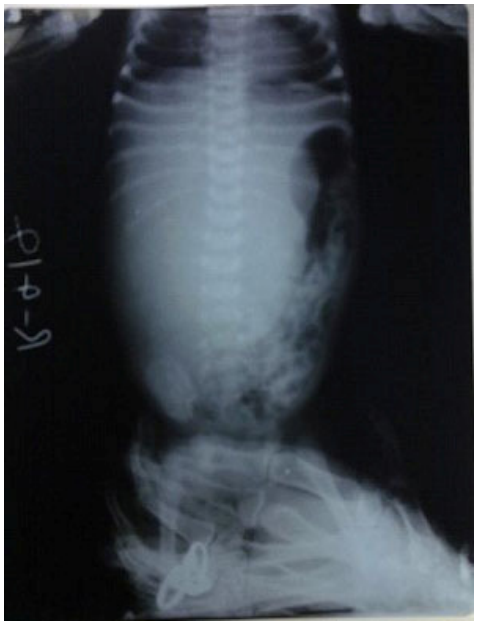
CASE REPORT

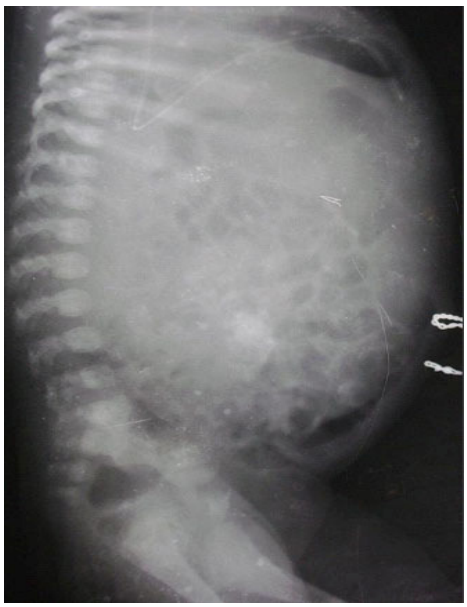
A one month–old, 3 kg, girl child was admitted to our hospital with a lump in the abdomen since birth. The antenatal history was not significant. She was the first born, who was delivered normally at the hospital, to a Gravida I, Para 0, 22 year old mother. Her general examination revealed only anaemia. Her abdomen was distended and visible loops of bowel were also seen. A firm, non-tender, 10 x 8 cm, intra peritoneal lump was found to be occupying the right hypochondrium and the epigastric and the umbilical areas and the mobile transversally. There was no free fluid in the peritoneal cavity. The rest of the systemic examination was within normal limits.

A plain roentgenogram (AP and lateral view) of the abdomen and pelvis showed soft tissue density with calcifications on the right side, displacing the intestine to the left side [Table/Fig 1] and [Table/Fig 2].

[Table/Fig 1] and [Table/Fig 2]: Plain Roentgenogram (AP and lateral view) of abdomen: Showing soft tissue density with

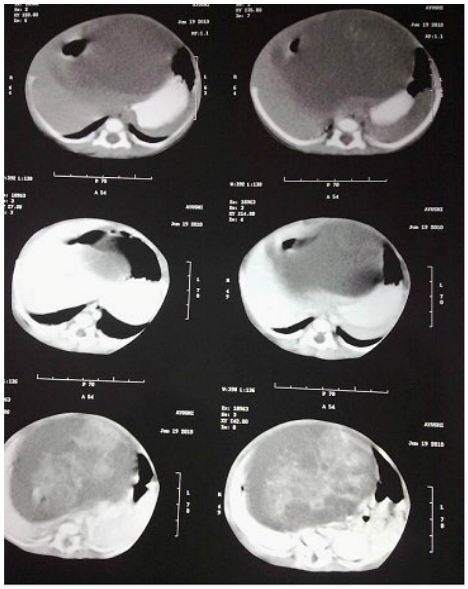
calcification& displacement of bowel loops to the left side.





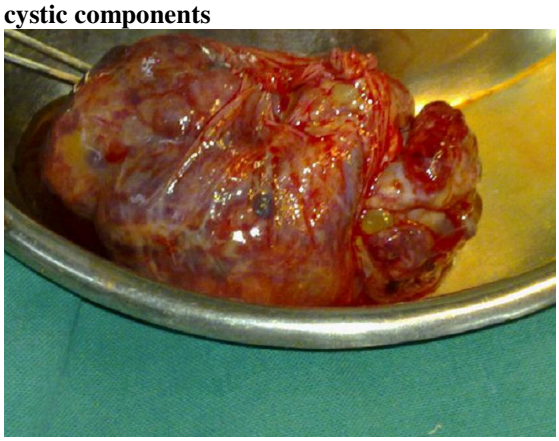
USG (Ultra sonography) of the abdomen showed a large heterogeneous mass of about 10 x 8 cm, which was partially solid and cystic, with thick internal echos and calcifications, which was suggestive of intra peritoneal teratoma. CT scans of the abdomen confirmed the findings made by the USG [Table/Fig 3]. The intestinal loops were displaced towards the left side of the abdomen. There was no free fluid in the peritoneal cavity.

[Table/Fig 3]: CT scan of abdomen - Showing heterogeneous, intra peritoneal teratoma with calcification and displacing bowel loops to left side



Exploratory laparotomy revealed a large mass of cystic and solid consistency, arising from the mesentery of the jejunum and the ileum, and the tumour was completely excised [Table/Fig 4].

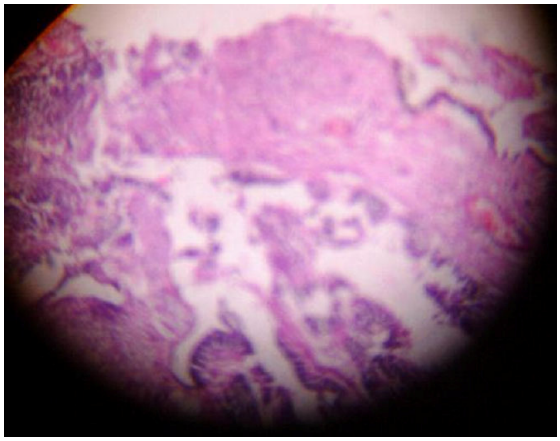
[Table/Fig 4]: Excised tumor - showing solid and cystic components



Her post-operative period was uneventful. The histology of the excised specimen confirmed the diagnosis of mature teratoma, with rare microscopic foci of the immature elements [Table/Fig 5]. As her serum alpha foetoprotein (AFP) levels were markedly high (1102.6ng/ml) and as the histology also showed immature elements, she was advised chemotherapy, but parents refused it. A repeat USG of the abdomen, 2 months after surgery, was found to be normal and the repeat serum AFP level was 116.0ng/ml. She is on regular

follow up, is doing well and is gaining weight as well.

[Table/Fig 5]: Histology of the excised tumor– Showing mature teratoma with rare foci of immature elements as well



DISCUSSION

Teratomas are lesions containing elements which are derived from the three primary germ layers and the most common sites for teratomas are the sacrococcygeal, mediastinal, retroperitoneal, and the gonadal organs [1], [2], [4]. Extra-gonadal, intra peritoneal teratomas, especially those arising from the mesentery and the mesocolon, are very rare in infants and children [2], [3], [4], [5], [6], [7]. Abdominal teratomas may present as abdominal distension, lump in the abdomen, features of intestinal obstruction, etc. The present case also presented as an abdominal lump.

It is possible to suspect abdominal / mesenteric teratomas by radiological investigations; Roentgenogram, USG, and CT scan of the abdomen with the presence of calcifications within the mass. In many of the cases, USG is useful in localizing and diagnosing the teratoma, but CT scans of the abdomen are the most precise tools [2], [7]. We were also able to make a provisional diagnosis of intra peritoneal teratoma on the basis of radiological investigations. Pre-operative diagnosis of the teratoma may not be possible in all the cases and in these cases the diagnosis has to be confirmed by the histology of the excised tumour [1], [3], [4]. Prenatal diagnosis of the mesenteric teratoma by USG has been also reported. Prenatal USG helps in the planning of a case for a multi-disciplinary approach and early intervention [5], [8].

Complete surgical excision is the mainstay in the management of intra-abdominal teratoma. Complete tumour resection is sufficient for cure in benign teratoma [1], [2], [3], [4], [5]. Most of the abdominal teratomas are benign in nature and are composed of mature cells; however, 20-25% of these may also contain immature elements [4]. Immature teratomas may contain variable quantities of immature neural tissues resembling embryonic components and these may co-exist along with the mature tissues [2], [4], [5]. We were also able to excise the tumour completely and the histology of the tumour showed rare foci of immature elements. The presence of immature elements in the histology of the excised tumour warrants the need of chemotherapy and regular follow up [4]. Serum AFP assay is a reliable method for detecting the recurrence in teratomas [9]. In our case, the pre-operative serum AFP level was 1102.6ng/ml and the repeat serum AFP done after two months was 116.0ng/ml. Mesenteric teratomas are rare in infants and children, but must be suspected if calcification is found by radiological investigations.

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