



Gastric teratoma: A series of 7 cases[☆]

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ABSTRACT

Background: Gastric teratoma is a rare entity comprising less than 1% of germ cell tumors of childhood. We present a series of seven gastric teratomas with a review of literature.

Objective: To study the demographic profile, clinicopathological features and follow-up data of gastric teratomas. **Methods:** We did a retrospective analysis of 7 cases of gastric teratomas more than 15 years and studied their demographic profiles, clinicopathological features and follow-up data.

Results: We came across 7 cases of gastric teratomas out of which 5 were mature and 2 were immature. One case of immature teratoma came back with recurrence and another one had an unusual finding of presence of renal and pulmonary tissues, which has not been reported earlier.

Conclusion: Ours is the second largest case series of gastric teratomas in the pediatric age group and 2 out of 7 of our cases had immature elements. We also take this opportunity to report a case of gastric teratoma with the unusual histological finding of immature renal and pulmonary tissues, which has not been described previously.

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Gastric teratoma is an extremely rare tumor of childhood, accounting for less than 1% of all teratomas diagnosed in this age group. Most of the reported cases are benign and mature. Only a few cases of immature gastric teratomas have been reported so far. We came across 7 cases of gastric teratomas, 2 of which were immature. One immature teratoma recurred after 2 years with malignant elements. The other immature teratoma showed presence of immature renal and pulmonary tissues, something not described previously.

1. Methods

All cases of gastric teratomas diagnosed more than a period of 15 years (2000–2015) were retrospectively reviewed. The demographic profiles of the patients, clinicopathological features and follow-up data were recorded. Formalin-fixed paraffin embedded tissues were available in all cases. Histopathological features were reviewed and

the tumors were categorized by consensus as mature and immature. Norris grading system was used to quantify the amount of immaturity.

2. Results

Seven cases of gastric teratomas were diagnosed more than the last 15 years. All our cases were boys. Their ages ranged from 2 days to 60 days with a median age of 15 days. Out of the 7 cases, 5 were mature and 2 were immature. Long term follow-up was done in all cases and only one case came back with recurrence and an additional malignant component. The second case of immature teratoma had immature pulmonary and renal tissues. The clinicopathological details of the cases are summarized in Table 1.

Four cases involved the greater curvature and 3 involved the anterior wall of the stomach. Most of the patients presented with abdominal distension, respiratory distress and features of intestinal obstruction. An unusual presentation was malena in case 1 [1]. Serum AFP level was noted in all the cases. It was found to be within the physiological range in the 3 mature teratomas, raised in 2 mature teratomas but was markedly raised in both the cases of immature teratomas. In case 4, the level was 1560 ng/ml during recurrence.

2.1. Radiological findings

X-ray features in most cases showed large, partly calcified masses. Sonograms were not very helpful in determining the size and origin of the masses. However, CT scan proved useful in most of the patients.

[☆] Contribution by authors: Dr. Shabnam Parvin: Literature search, manuscript preparation. Dr. Moumita Sengupta: Manuscript editing, intellectual content. Dr. Prafulla Kumar Mishra: Clinical evaluation and management. Dr. Sugato Banerjee: Clinical management. Dr. Uttara Chatterjee: Concept, histological diagnosis, manuscript editing, review, intellectual content. Dr. Manoj Kumar Chaudhuri: Intellectual content.

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Table 1
Clinicopathological features of the seven gastric teratomas.

Sl. No.	Age	Clinical features	Serum AFP level (ng/ml)	Location	Surgery	Gross	HPE	Follow-up
1	43 days	Abdominal distension with malena	150 (N)	Greater curvature	Laparotomy with excision of mass and repair	Solid and cystic mass measuring 7 × 4 × 4 cm	Mature	Doing well 5 years postsurgery
2	3 days	Abdominal distension with respiratory distress	252 (N)	Anterior wall of stomach	Laparotomy with excision of mass and repair	Solid and cystic mass measuring 8 × 6 × 5 cm	Mature	Doing well 4 years postsurgery
3	15 days	Abdominal distension with intestinal obstruction	607 (raised)	Greater curvature	Laparotomy with excision of mass and repair	Solid and cystic mass measuring 7 × 5 × 5 cm	Mature	Lost to follow-up after 6 months
4	2 days	Abdominal distension, respiratory distress, vomiting	760 (raised)	Anterior wall, crossing the lesser curvature and extending into the posterior wall	Sleeve resection	8 × 8 cm, multiloculated, variegated, solid and cystic mass including bony hard areas	Immature grade I	2 years later presented with recurrence, treated successfully, no recurrence 5 years thereafter
5	60 days	Abdominal distension with vomiting	98 (N)	Greater curvature	Laparotomy with excision of mass and repair	Solid and cystic mass measuring 9 × 7 × 5 cm	Mature	Doing well 8 years postsurgery
6	45 days	abdominal distension with palpable mass	456 (raised)	Anterior wall extending to the retroperitoneum	Laparotomy with excision with partial gastrectomy and anastomosis of fundus with antrum	Solid and cystic mass measuring 10 × 8 × 6 cm	Mature	Followed up for 4 years postsurgery with no recurrence
7	4 days	Respiratory distress with abdominal distension	800 (raised)	Greater curvature extending into anterior wall and posterior wall of body along the greater curvature	Laparotomy with excision with partial gastrectomy	Solid and cystic mass measuring 8 × 8 × 5 cm	Immature grade II	No complaints for 1 year

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