CASE REPORT

Surgical Management of Neonatal Parapancreatic Giant Teratoma

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ABSTRACT

Teratoma is a common germ cell tumor, which most cases can be diagnosed by imaging examination. At present, surgical treatment is the main treatment method, but the occurrence of teratoma in some cases brings lots of trouble. Our case was a 2-month-old baby boy with abdominal distension as main manifestation at the beginning, and was diagnosed by CT as a large mass in the left abdomen (teratoma). The mass adjoined closely to the pancreas and brought much complexity for surgical excision. We therefore share with our colleagues the surgical experience of this particular case. Surgical excision of intraperitoneal complex teratoma is the key to radical cure of the tumor.

INTRODUCTION

Teratoma is a common clinical germ cell-derived tumor, which is more common in the gonads of young women. The incidence of retroperitoneal tumors is about 0.2-0.8%, and teratoma account for about 6-18% [1]. Retroperitoneal teratoma is especially rare in children, accounting for about 2-5% [2, 3]. Retroperitoneal teratoma is classified into mature and immature types, and most of them are benign. [4]. Typical CT appearance of teratoma is cystic and solid irregular mixed density [5]. At present, complete surgical removal of the tumor is the best treatment for retroperitoneal teratoma in children [6]. However, if a retroperitoneal teratoma is close to an abdominal organ or blood vessel, surgery may be more difficult. [7].

The case we reported was a 2-month-old boy with abdominal distension as the main manifestation at the beginning, and was diagnosed by CT as a large mass in the left abdomen (teratoma). The large mass adjoined closely to the pancreas and brought a lot of trouble for surgical excision.

In particular, the basal portion of the tumor growth was in direct contact with the pancreatic body and the lesser curvature of the stomach. From this perspective, how to prevent the injury of the pancreas during the operation so as to avoid the occurrence of traumatic pancreatitis is the key to management.

After admission, relevant examination showed that AFP was greater than 1000mg/ml. CT and CT 3D reconstruction (Figure A and B): the left abdominal cavity was about 130mm*120mm*100mm mixed density mass shadow, closely related to the pancreas, with clear boundary, no obvious enlarged lymph nodes observed in the peritoneal cavity.

Surgical procedure: After successful anesthesia, the child was placed in supine position. Took a 10cm transverse incision on the left side of the abdomen, and cut the abdominal wall layer by layer. The size of the tumor was about 150mm*120mm*100mm, and the boundary was clear, but left kidney and spleen were visibly compressed. Pancreas and stomach were found to be closely related. Gastric and splenic arteries, veins and pancreatic arteries were dissected and separated from the tumor by opening the tumor capsule close to the tumor surface.

Further exploration revealed that basilar part of the tumor adhered to the lesser curvature of the stomach. Partial resection and repair of the lesser curvature of the stomach were performed to completely remove the tumor (Figure C).

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After detecting no bleeding on the anatomic surface of the pancreatic body, the abdomen was closed layer by layer. No drainage tube was placed intraoperatively. The child recovered well and was discharged from our hospital on the 10th day after the operation. Postoperative pathology indicated teratoma (Figure D).

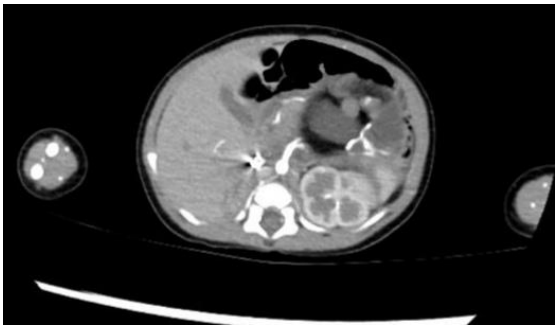

Figure 1 abdominal CT scan

The diagnosis of teratoma can be confirmed by imaging examinations such as ultrasound, CT and MRI [5]. Our case is a child with retroperitoneal teratoma, and the tumor is relatively large. In particular, it was closely related to the pancreas and the lesser curvature of the stomach. Therefore, how to avoid the occurrence of traumatic pancreatitis and ensure the complete resection of the tumor is the key to a successful surgical resection. To the best of our knowledge, accidental injury to the pancreas during surgery often causes much trouble [8]. Our clinical experience shows that pancreatic injury during surgery is likely to lead to poor prognosis and traumatic pancreatitis. However, during the operation, we performed a radical removal of the tumor, and avoided damage to the pancreas

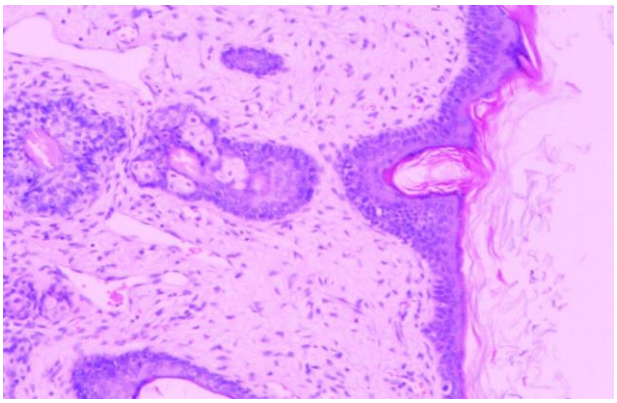

Figure 2 postoperative pathology

Conclusion

Primary pancreatic lymphoma is a rare disease with a challenging diagnosis by conventional imaging. The biopsy is essential and endoscopic ultrasonography with fine-needle aspiration is a valuable tool to perform it. Most cases show B-cell immunophenotype and have good results with chemoradiotherapy. Surgical intervention is reserved to diagnostic and palliative procedures and may be considered as a rescue treatment in selected cases.

T-cell PPL is even rarer with a paucity of cases reported in literature. The prognosis is worse and the best therapeutic choice is not established due to scarce evidence.

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