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CASE REPORT

Neonatal Teratoma

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SUMMARY

Teratomas are neoplasms originating in pluripotent cells. They are composed of a wide diversity of tissues representing all three germ cell layers. The sacrococcygeal area is the most common extragonadal site. A sacrococcygeal teratoma is the commonest teratoma presenting in the neonatal period. We present a term neonate who had a large teratoma in the sacrococcygeal region. The tumour was associated with polyhydramnios and elevated alpha-fetoprotein at birth. Enbloc resection of the tumour resulted in rapid decline in the alpha-fetoprotein. Histopathological examination of the mass confirmed the tissues of all the three germ cell layers.

Key Words: Teratoma, Neonate, Sacrococcygeal area

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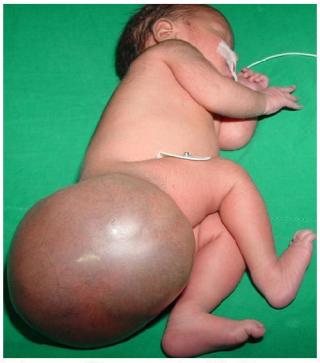
Introduction

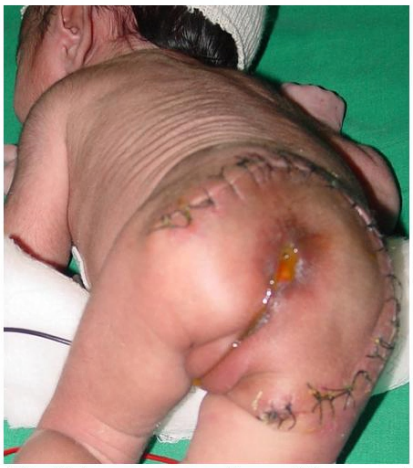
Teratomas are neoplasms containing tissues of all the three germ cell layers. The sacrococcygeal area is the most common extragonadal site. The commonest teratoma presenting at birth is sacrococcygeal teratoma with an incidence of 1 in 40000 births [1],[2]. A very large tumour may give rise to dystocia. Apart from a large swelling, there may be associated polyhydramnios and elevated alpha-fetoprotein. We describe a large sacrococcygeal teratoma in a term neonate.

Case Report

A 3.3 kg term female neonate born to a 35 year old multiparous mother by caesarian section was noted to have a swelling of size 26 ×17 cm in the sacrococcygeal region with a lobulated surface and variable consistency [Table/Fig 1]. An antenatal scan at 37 weeks detected the mass and the associated polyhydramnios. Examination of the swelling revealed dilated veins over its surface and a variable consistency. The anus was displaced anteriorly. The systemic examination was normal. Ultrasonograhy of the swelling revealed mixed echogenicity with large anechoic cystic areas,scattered tiny hyper echoic areas and good vascular supply. Ultrasonography of the abdomen was normal. There was no intrapelvic extension of the mass. The serum alpha-fetoprotein (AFP) level was 59,908ng/ml. The newborn underwent enbloc resection with coccyx on the fifth day of life (Postoperative appearance shown in Table/Fig 2) [Table/Fig 2]. AFP levels declined to 10129ng/ml within the next 7 days.



(Table/Fig 1) shows swelling measuring 26× 17cm over sacrococcygeal area



(Table/Fig 2)Appearance after enbloc resection

Histopathology

The resected mass weighed 700g. The gross specimen showed an ill defined external capsule and fibrofatty tissue with foci of haemorrhage. The cut section revealed solid to cystic areas, multiple mucin filled cysts forming ill defined lobules, foci of calcification and bone. The microscopic appearance included mature glial tissue resembling brain and immature neroepithelial elements forming rosettes. Mesodermal elements composed of immature rhabdoid like elements, immature and mature cartilage, bone, muscle and fat in different sections. Epidermis and dermis structures included hair follicles and sebaceous and sweat glands. Varity of the epithelium included columnar, pseudostatified and ciliated epithelium and glands lined by intestinal epithelium with goblet cells. Focal calcification and large myxoid areas of immature neural tissues were also identified.

Discussion

The sacrococcygeal area is the most common extragonadal site for teratoma. A saccrococcygeal teratoma is the commonest teratoma presenting in the neonatal period. The tumour protrudes from the space between the anus and the coccyx and is usually covered by the skin like in our case. About 70% of teratomas occur in females, 48% are benign, 29% are frankly malignant and 23% have immature but not malignant components. Type 1 is the most common and predominantly external tumour on the buttocks. Other types have intrapelvic extension or presacral components[1],[2],[3].The present case had only an external tumour. The tumour may be accompanied by polyhydramnios. A very large tumour may give rise to dystocia. The present case had a large tumour associated with polyhydramnios and breech presentation and hence, was delivered by caesarian section. The tumour may be both solid and cystic in nature. Reports on malignancy vary from 10% in the neonatal period up to 50% if excision is delayed until later. Alpha-fetoprotein is a useful tumour marker. It is usually elevated at birth and reduces to near normal within 4 to 5 days of complete resection, like in the present case. The optimal treatment is the enbloc removal of the tumour along with the coccyx within the first few days of life. Immature or vascular tumours may bleed more. The pelvic floor, despite its gross stretching, recovers normal function. Chemotherapy is reserved for unresectable, malignant and immature teratomas[1],[4].

Consent

Baby's parents have given consent for the publication of images for academic purpose.

References

[1] Mackinlay GA. Sacrococcygeal teratoma, In Forfar and Arneil's text book of paediatrics,4th edn.Churchill Livingstone, London, UK 1861-62.
[2] Chisholm CA, Heider AL, Kuller JA, von Allmen D, McMahon MJ, Chescheir NC.Prenatal diagnosis and perinatal management of fetal sacrococcygeal teratoma. Am J Perinatol 1999; 16:47-50.
[3] Perrelli L, D'Urzo C, Manzoni C, Pintus C, De Santis M, Masini L, Noia G.Sacrococcygeal teratoma. Outcome and management. An analysis of 17 cases. J Perinat Med 2002; 30:179-84.
[4] Schmidt B, Haberlik A, Uray E, Ratschek M, Lackner H, Hollwarth ME. Sacrococcygeal teratoma: clinical course and prognosis with a special view to long-term functional results. Pediatr Surg Int 1999; 15:573-6.