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Case Report OMICS International

Sacrococcygeal Teratoma - An Interesting Case and Infrequently seen Extension in Spinal Cord

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Abstract

A male baby of 2.6 kg was born to Gravida2Para0Abortion1 mother through normal vaginal delivery at 33 weeks of gestation. Baby had normal Apgar score of 8/9/9 at one, five and ten minutes respectively. At birth baby was noticed to have large swelling in the sacrococcygeal region which was approximately having the size of 10*2 cm, with solid consistency and erythematous.

Keywords: Sacrococcygeal teratoma; Kidney

Introduction

Teratomas are most common neonatal tumour and consist of tissues that arise from embryonic ectoderm, mesoderm and endoderm. The word teratoma is derived from Greek words teratos/teras, meaning "monster," and onkoma/oma, denoting a swelling, tumour or neoplasm. It is a true tumour or neoplasm and consists of multiple tissues of different kinds and these tissues are foreign to the parts in which they arise. The common locations of teratomas in pediatric population are sacrococcygeal, gonadal, mediastinal, and retroperitoneal [1]. Here we report a new-born having sacrococcygeal teratoma with rare intraspinal extension.

Case

A male baby of 2.6 kg was born to Gravida2Para0Abortion1 mother through normal vaginal delivery at 33 weeks of gestation. Baby had normal Apgar score of 8/9/9 at one, five and ten minutes respectively. At birth baby was noticed to have large swelling in the sacrococcygeal region which was approximately having the size of 10*12 cm, with solid consistency and erythematous (Figures 1 and 2). There was scrotal skin thickening with hydrocele and anal opening was present in centre of the mass. There was differential edema with only right lower limb having pitting edema. Detailed physical examination showed slight retrognathia with no other malformation. Ultrasonography of the abdomen showed minimal ascites, distended urinary bladder, bilateral enlarged kidney with moderate hydronephrosis, heterogonous swelling with cystic solid area with measurement of approximately 7.9 cm*8.1 cm with vascularity on colour Doppler. MRI done showed enhancing heterogonous density lesion with area of calcification, fat attenuation and cystic component in presacral region with internal and external component. Internal component extended into lower abdomen with intraspinal extension in sacral region, with features suggesting type 3 Sacrococcygeal teratoma (Figure 3). Echo and cranial ultra-sonogram done showed no malformations. The infant parents shifted the infant to other hospital where the infant died because of neonatal sepsis without undergoing any surgery.

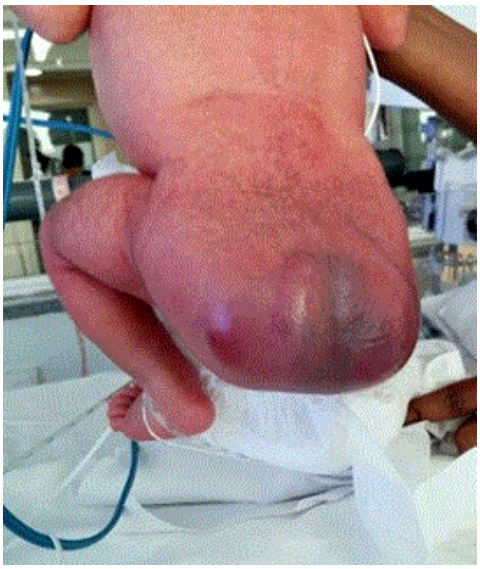

Figure 1: Figure showing swelling (mass) in Sacrococcygeal region which is about the size of 10 × 12 cm, solid and erythematous.

Discussion

Teratomas are most common neonatal tumour that can originate anywhere in the body but the most common site of origin is the Sacrococcygeal region. The estimated incidence range from 1/35 000 to 1/40000 live births. It has sex predilection with female affected more than male with ratio being 4:1 [1]. These tumours contain cell lineage from all three cell lines, i.e., endoderm, mesoderm and ectoderm. They are believed to originate from the totipotent cells of Hensen's node [2,3]. These tumours can be both benign and malignant in nature. Sacrococcygeal teratoma (SCT) is the most common germ cell tumor (GCT) of childhood and fetus, with an estimated incidence of 1 in 27,000 in fetal neoplasm [4].

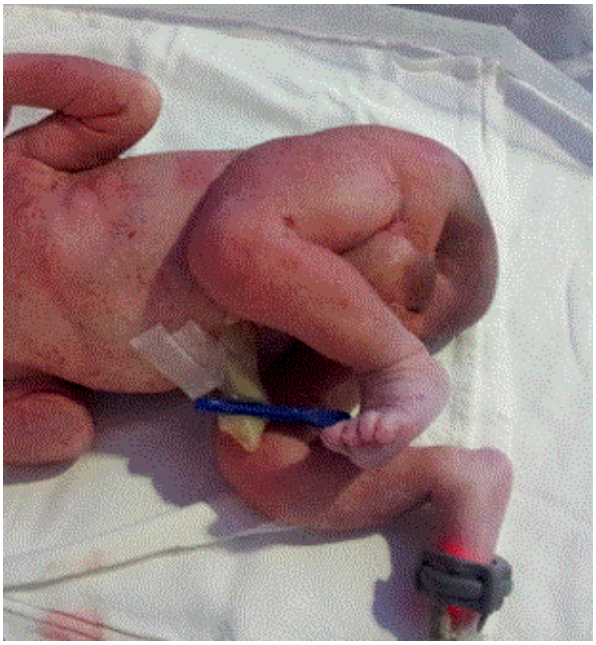

Figure 2: Figure showing swelling (mass) in Sacrococcygeal region which is about the size of 10*12 cm, solid and erythematous. Also note scrotal skin thickening with hydrocele.

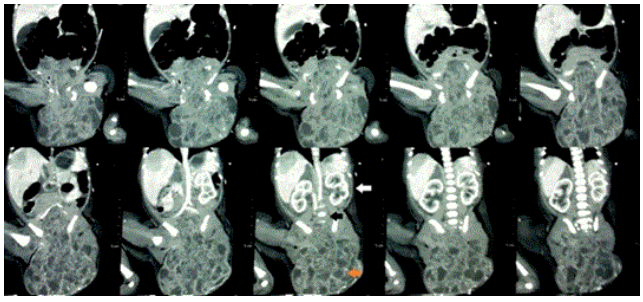

Figure 3: MRI scan of the baby showing intra-spinal extension of the sacrococcygeal teratoma.

Classification of SCT is based extent to which a tumor is external and/or internal and is given by American Academy of Paediatrics Surgical Section (APPSS) [5].

Type I—Predominantly external with minimal presacral component.

Type II—Present externally but with significant intrapelvic extension.

Type III—Apparent externally but predominantly a pelvic mass extending into the abdomen.

Type IV—Presacral with no external presentation.

Antenatally SCT causes polyhydramnios, hydrops fetalis, high cardiac output failure and prematurity. Postnatally, (type 3) teratoma may present as abdominal lump, and symptoms arising from compression of surrounding structures like urogenital or gastrointestinal systems etc. Antenatal diagnosis can be done by prenatal ultrasound where SCT appear as fluid filled cavity. Postnatally the neonate is investigated with CT scan or MRI to know about the extent and internal anatomy of the lesion [6,7].

Differential diagnosis which are considered and can be differentiated on the basis of MRI, ultrasound and pathological examination includes Extraspinal ependymoma, Ependymoblastoma, Neuroblastoma, Rhabdomyosarcoma and Terminal myelocystocele [8,9]. Treatments of SCT that have spinal extension consist of complete resection of the tumor followed by close follow up. Post-operative complications include haemorrhage, bleeding, neurological deficit, bladder dysfunction and recurrence [10,11].

Conclusion

Sacrococcygeal tumor is the most common tumor diagnosed in fetus. SCT has been classified as four types based on weather tumor are external and/or internal. The spinal cord involvement of SCT is rare and management involves resection and close follow up.

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