

Radiodiagnosis

KEYWORDS:

Sacrococcygeal teratomas (SCT)

PRENATAL ULTRASOUND AND MAGNETIC RESONANCE IMAGING FEATURES OF SACROCOCYGEAL TERATOMA (SCT).



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ABSTRACT

Sacrococcygeal teratomas (SCT) are the most common solid tumour in newborns. We report a case in which a sacrococcygeal teratoma was identified and characterized on prenatal ultrasound and magnetic resonance imaging (MRI). Prenatal assessment of the SCT is necessary for counselling of the parents and for planning of surgery;

Case report

We presented a case of 26 years old female at period of gestation 19 weeks 1 day. On ultrasound (USG) average gestational age was 21 weeks 1 day and effective fetal weight was 401 grams. On USG there was a cystic mass arising from the sacrococcygeal region (Figure 1a & 1b). Further magnetic resonance imaging (MRI) of this antenatal patient was done. On MRI there was a cystic mass arising from the sacrococcygeal region of the fetus suggestive of sacrococcygeal teratoma (Figure 2a & 2b).

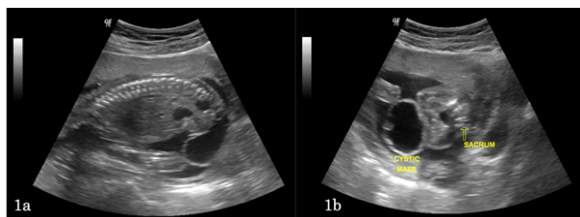


Figure 1a & 1b: USG images of fetus showing a cystic mass arising from the sacrococcygeal region. No internal septation or solid component seen.

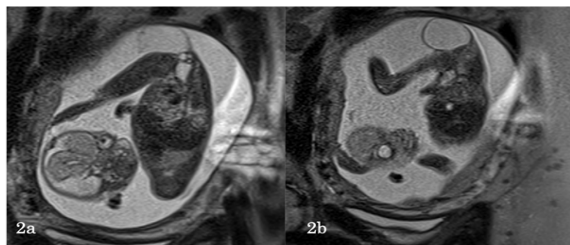


Figure 2a & 2b: MRI sagittal T2 weighted images showing a large cystic mass with a large extrapelvic component and showing a small intrapelvic component. This mass has predominantly fluid density without any solid component.

Discussion

SCT has a reported incidence of 1 : 35,000–40,000^{1,2} and a 3:1 female to male ratio³. SCT consist of variable tissues from all three germ cell layers. Therefore, imaging findings of are heterogeneous and variable and may show a combination of both cystic and solid components, however 15 % are completely cystic. The major complication is malignant degeneration which is manifested in 11-

35% of teratomas. Signs suggestive of malignancy are predominantly solid nature of mass, presence of hemorrhage and/or necrosis within the mass and sacral bony destruction, invasion of surrounding structures or metastatic disease, however accurate diagnosis is made on histopathology. Morphologically SCT have been classified into four groups by American academy of paediatrics surgery section survey.

Type I - Primarily external in location.

Type II - Equal amounts of internal and external components with a dumbbell shape.

Type III - Small external component and is primarily located within the abdomen and pelvis.

Type IV - Entirely internal without a visible external component.

Most tumors are type I and surgical management can be done, with several studies showing cure rates upto 95%⁴. Neo-adjuvant cisplatinum-based chemotherapy is given in tumors with significant extension and/or metastases. Surgery remains the mainstay of therapy, however recurrent malignant sacrococcygeal teratomas is major challenge in the treatment. Preoperative platinum based chemotherapy have conferred some success.

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