

Prenatal diagnosis of sacrococcygeal teratoma Diagnóstico pré-natal de teratoma sacrococcígeo

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Abstract

Sacrococcygeal teratoma (SCT) is the most common congenital tumor, with an incidence of 1:40,000 live births. It originates from multipotential embryonic stem cells and most tumors arise from the anterior surface of the sacrum or coccyx. On ultrasound, SCT presents as a heterogeneous mass of variable size that stands out from the sacrococcygeal region. Here we present a picture of a SCT detected at the 20-22 weeks ultrasound examination in our institution. The fetus, who had a normal ultrasound examination at 13 weeks, also presented other characteristics suggesting this diagnosis, later confirmed by an histopathological analysis.

Keywords: Prenatal; Diagnosis; Sacrococcygeal; Teratoma; Ultrasound

The picture presented here (Figure 1) shows a predominantly cystic mass arising in the fetal sacrococcygeal region, with 68 x 50 mm of major axis, vascularized, and detected at the 20-22 weeks ultrasound examination. The fetus, who had a normal ultrasound examination at 13 weeks, also presented hyperechoic kidneys with dysplastic aspect, a distended bladder and subjectively increased amniotic fluid. Echocardiography showed no anomalies. The couple opted for termination of pregnancy and the histopathological analysis confirmed an immature teratoma with an important extension into the pelvic cavity, causing anterior displacement of the perineum and pelvic organs. There was also hyperplasia of the erythroid lineage in the hepatic sinusoids, probably due to anemia related to the presence of the tumor.

Sacrococcygeal teratoma (SCT) is the most common congenital tumor, with an incidence of 1:40,000 live births. It derives from multipotential embryonic stem cells from the anterior surface of the sacrum or coccyx. The majority of cases are sporadic, although a familiar subtype may be present in 25%¹. On ultrasound, SCT presents as a heterogeneous mass of variable size that stands out from the sacrococcygeal region,

with dense aspect or acoustic shadowing suggesting calcifications (not perceptible in this image)². Other ultrasound signs include the presence of alterations caused by compression of adjacent structures, as the bladder distension and dysplastic kidneys evident on this image.

Most SCT are diagnosed on the 3rd trimester ultrasound. When the diagnosis occurs in the second trimester, as succeeded in this case, a worse prognosis is associated due to fast growth of the tumor and higher probability of arteriovenous shunts development with possible development of fetal hydrops or death. The differential diagnosis of SCT includes sacred meningocele, gastrointestinal pathology, retroperitoneal cystic tumor and ovarian cyst³.

Histologically, 90% of SCT are benign tumors and the vast majority of these occur in female fetuses (as in this case)⁴; cases of malignant histology have an equal incidence in both sexes⁵. SCT are usually extra-pelvic and subdivided into 4 types according to their pelvic extension that can be minimal (Type I) or total (Type IV); most cases (80%) are type I or II¹.

85% of SCT are solid tumors with cystic component, being the remaining purely cystic. In the case described here, the ultrasound characteristics fall into a type II SCT with mixed component. Most fetuses with SCT are hemodynamically stable and surgical correction of the tumor can be performed in the postnatal pe-

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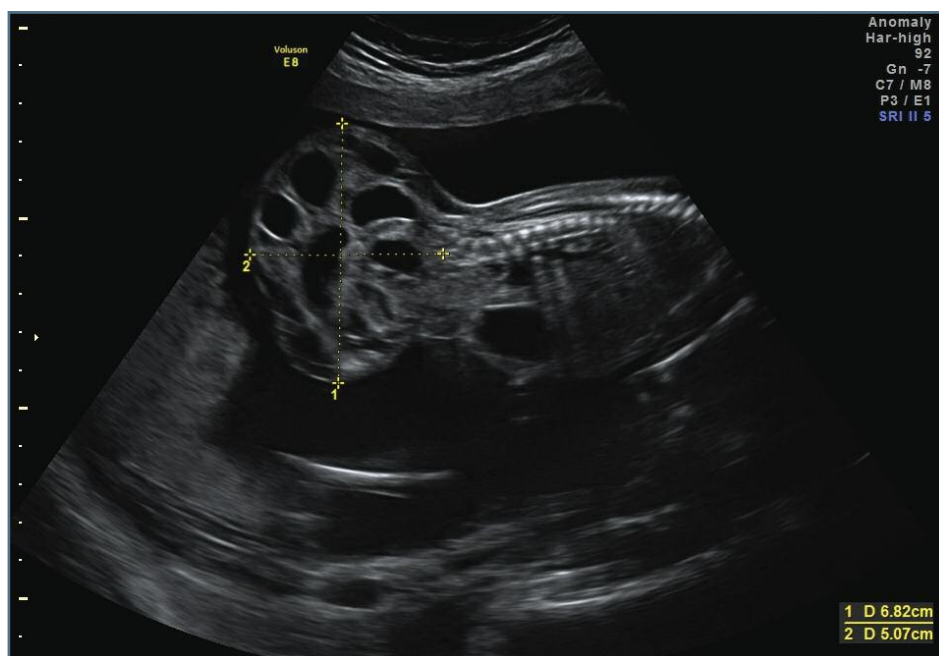


FIGURE 1. Ultrasound image of a heterogeneous (solid and cystic), vascularized mass, arising from fetal sacrococcygeal region with an important extension into the pelvic cavity, compatible with a type II sacrococcygeal teratoma.

riod. However, in case of rapid tumor growth or arteriovenous shunt, there is a high probability of developing heart failure and intrauterine death¹.

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