# MAGNETIC RESONANCE IMAGING (3 TESLA) OF FETAL SACRO-COCCYGEAL TERATOMA; A CASE REPORT

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## ABSTRACT

Sacrococcygeal teratoma (SCT) is the most common congenital tumor in the neonate, reported in approximately 1/35 000 to 1/40 000 live births. Approximately 80% of affected infants are female, a 4:1 female to male preponderance. We report a case in which a sacrococcygeal teratoma was identified and characterized on prenatal 3 Tesla MRI.

**Key words:** Sacrococcygeal teratoma; MRI; congenital; tumour; prenatal

## Introduction

SCT is the most common congenital tumor, occurring about 1 in 40,000 live births, with a female predisposition (approximately 4:1).[1] A location based classification system (Altman classification) according to the American Academy of Paediatric Surgery Section Survey is used in clinical practice.[2] Most SCTs are solid or solid-cystic, with 15% being purely cystic.[3] We report a case in which a sacrococcygeal teratoma was identified and characterized on prenatal 3 Tesla MRI.

## Case Report

A 28-year-old multigravida (G3 P2+0) at 28 weeks gestation underwent routine prenatal ultrasonography. A large heterogenous mixed echogenic solid cystic, intrauterine structure was found adjacent to the pelvic region of fetus and subsequently she was referred toour institution which is a tertiary care facility hospital for further evaluation and management. She had no history of acute abdominal pain, recent trauma or vaginal bleeding and her pregnancy had been progressing well. After explaining the process of MRI investigations and obtaining informed written consent from the patient an MRI was done to further delineate the solid cystic heterogenous mixed echogenic lesion found on previous ultrasonography. MRI was performed with a 3.0 Tesla magnet equipped with a phased-array body coil. The nonsedated mother was positioned in supine. The following imaging sequences were performed: Axial FIESTA Breath Hold (Fig. 1, TR/TE, 5/1.9; flip angle, 70°; section thickness, 8 mm), Axial T1 weighted Fat Saturated (TR/TE, 360/6.4; flip angle, 90°; section thickness, 6 mm), Coronal FIESTA BH (Fig. 2, Fig. 3, TR/TE, 4.7/1.7; flip angle, 70°; section thickness, 8 mm). MRI showed heterogenous mixed intensity large solid-cystic mass arising from the sacrococcygeal region of the fetus with large extra pelvic component and very small intra pelvic component, suggestive of a sacrococcygeal teratoma (Fig. 1) of type 1 of Altman classification.[2] The mass measured about 8.1cm by 7.7cm by 7.3cm. No evidence of polyhydramnios was noted. The patient was counseled and advised to visit to antenatal OPD once in every week.

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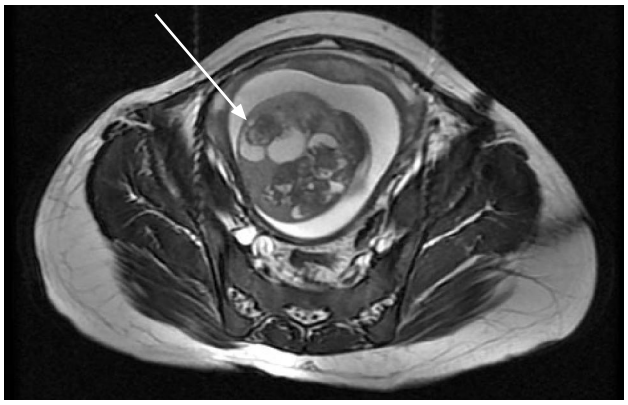

**Figure 1:** Axial FIESTA showing a mixed intensity intrauterine mass (arrow).

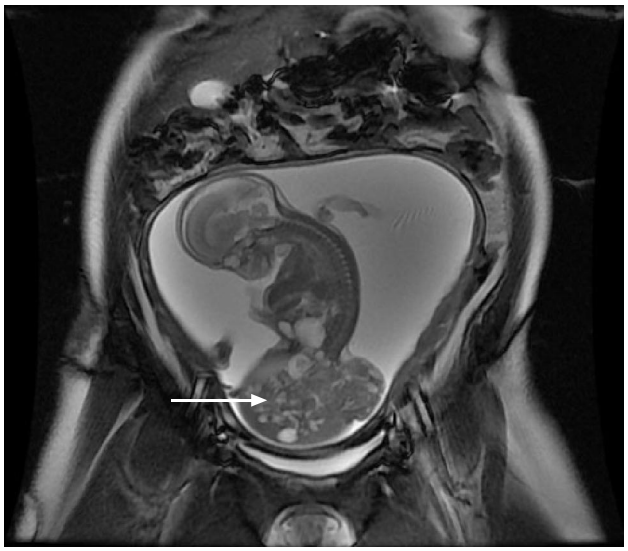

**Figure 2:** Coronal FIESTA showing a mixed intensity mass arising from fetal sacrococcygeal area (arrow)

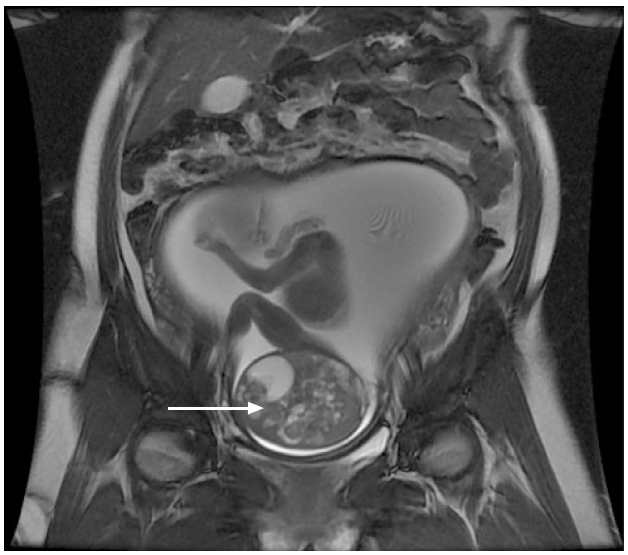

**Figure 3:** Coronal FIESTA showing a mixed intensity solid cystic mass lesion in lower fetal pole (arrow)

## Discussion

SCT is the most common congenital tumor, occurring about 1 in 40,000 live births, with a female predisposition (approximately 4:1).[1] A location based classification system (Altman classification) according to the American Academy of Paediatric Surgery Section Survey is as follows: Type 1 is predominantly external with a minimal presacral component, type 2 is also exophytic with significant intrapelvic extension, Type 3 has an external mass with a predominant intrapelvic mass, and type 4 is entirely presacral. Most SCTs are solid or solid-cystic, with 15% being purely cystic.[3] The differential diagnosis for fetal sacrococcygeal masses includes mening-ocele, myelomeningocele, myelocystocele, teratoma, lipoma, hamartoma, lymphangioma, hemangioma, chordoma, and ependymoma. SCT is not a neural tube defect, and there is no spinal dysraphism present though occasional sacral dysgenesis or hemiver-tebrae may be noted.[4] Caesarean section is indicated where foetuses with sacrococcygeal teratoma mea-suring larger than 5 cm as there is high chance of tumour rupture. Larger lesions may undergo tumour haemorrhage, polyhydramnios or nonimmune hydrops fetalis. Significant vascular shunting can predispose the mother to high-output cardiac failure and warrants emergency Caesarean section.

### Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

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