



Case Report: Prenatal diagnosis of soft tissue tumour of the fetal thigh

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ABSTRACT: We report a case of soft tissue tumour of the fetal thigh detected prenatally. A uniformly inhomogeneous mass on the inner aspect of the fetal right thigh was detected in a 36 year old woman in the 30th week of her first pregnancy. Colour Doppler demonstrated a vascular pedicle that may represent "feeder vessels" connected to the mass. No other anomalies were detected. Our differential for this soft tissue tumour included sarcoma, haemangioma and congenital myofibromatosis. The patient declined prenatal invasive testing. The pregnancy continued uneventfully and a 2.6kg baby delivered by C-section. Postnatal imaging and histology confirmed haemangioma. The classification, management and prognosis of this rare finding are highlighted.

INTRODUCTION: Although fetal tumours are rare, prenatal detection plays an important role in the understanding of the natural history and pathophysiology, which may be associated with serious illness or even death in the perinatal period

THE CASE:

- 36 year old primigravid at 30 weeks gestation
- Ultrasound suggestive of an enlarged fetal thigh
- Booking blood tests were normal and Diabetes was excluded.

Ultrasound:

- Uniformly inhomogeneous mass measuring 3cm x 4cm x 6cm inner aspect of the fetal right thigh (Figure 1)
- Colour Doppler showed "feeder-vessels" connecting to the mass. - Fetal pelvis and buttock appeared normal
- Limb movements observed
- No other abnormalities

Differential diagnosis:

- Sarcoma (rhabdomyosarcoma, fibrosarcoma)
- Haemangioma
- Congenital myofibromatosis

Management:

- Couple counselled on the scan findings
- Offered karyotyping with concomitant ultrasound guided fetal muscle biopsy- but they declined any invasive testing
- Continued with standard obstetric care and for delivery at term
- ELCS at 37 weeks gestation - delivered a 2.6 kg live infant
- Large tumour mass of the right thigh of the baby (Figure 2)
- Postnatal biopsy confirmed haemangioma

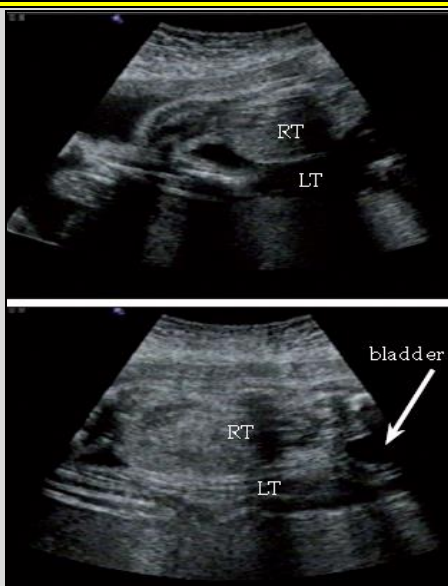


Figure 1 Sonographic images of the fetal thigh at 30 weeks demonstrating the soft tissue swelling in the medial aspect. (RT = right thigh; LT = left thigh)



Figure 2 Day 3 Postnatal image of swollen fetal right thigh

Discussion

- Meizner, (2000) have described tumours according to their location on the body e.g. head & neck, face, abdomen and retroperitoneum, skin, genitalia, sacrococcygeal region and tumours of the extremities.
- Differential for tumours of extremities include: (i) Vascular haematomas (ii) haemangioma (iii) lymphangioma (iv) sarcomas
- Sonographic diagnostic approach is based on 3 sets of ultrasound signs viz. general, organ specific and tumour specific
- Polyhydramnios occurs in about 50% of fetal tumours
- MRI in third trimester may be useful in diagnosis
- Rapid karyotyping should be evaluated for all suspected fetal tumours. Malignant tumours can acquire chromosome changes
- Fetal tissue biopsy may be considered when ultrasound diagnosis is uncertain and histology will provide diagnosis

Prognosis: Depends on

- Extent of tumour involvement of other organs
- Associated mechanical problems
- Proximity to vital organs or structures

Management:

- Involve multidisciplinary team capable of dealing with tumours
- Gestational age at diagnosis should be taken into consideration
- Parents should be given the option of TOP if <24 weeks
- May pose ethical dilemma in absence of life threatening anomalies
- With continuing pregnancy - risk of preterm delivery should be weighed against the need for urgent surgical intervention or relief of vitally compressed structures
- Delivery should be at a tertiary hospital

Conclusion:

- Although not a common occurrence, prenatal detection of fetal tumours will assure parents the best and most appropriate treatment for their unborn baby.
- Prenatal detection of fetal tumours will also alert the obstetrician and the multidisciplinary team of possible problems during pregnancy, labour and immediate postnatal period.

Reference:

- Israel Meizner. **Introduction to fetal tumors.** (2000). © Meizner www.TheFetus.net
- Israel Meizner. **Tumors of the extremities** (2000). © Meizner www.TheFetus.net



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