

Title: The value of MRI in management of uterine fibroids in pregnancy

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Dear Editor,

Uterine fibroids are relatively common in pregnancy and 10-20% develop fibroid-related complications¹. Here we present an unusual case due to the exceptionally large size of multiple uterine fibroids in a gravid uterus. It offers a striking visual impression on the potential complications and challenges that these cases may pose to obstetricians during pre-natal care and delivery.

A 26-year-old pregnant woman transferred care to our unit at 35⁺⁵ weeks in her first pregnancy. She had an unremarkable past medical history and a mainly uneventful pregnancy except for occasional abdominal discomfort. The symphysis-fundal-height was 41cm and multiple uterine fibroids were noted on abdominal palpation and antenatal ultrasonography. Magnetic resonance imaging (MRI) revealed 3 large anterior wall mural fibroids measuring 95x80mm, 119x112mm and 83x77mm (white dashed arrows, Panel A) extending across the anterior margin of the uterus (Panel B).

Uterine fibroids (leiomyomas) are benign smooth muscle tumours of the uterus and are generally asymptomatic during pregnancy. Uterine fibroids increase in size from a combination of increased hormone levels — oestrogen and progesterone — and augmented blood flow². “Red degeneration” occurs if tumour growth outpaces its blood supply resulting in tissue infarction and necrosis which usually manifests clinically with severe localised pain leucocytosis and fever^{1,3}.

Other fibroid-related complications during pregnancy include preterm labour, labour dystocia, malpresentation, abruption, postpartum haemorrhage and increased risk of emergency caesarean delivery^{1,4}, which is often technically challenging.

In this case, cross-sectional imaging clearly demonstrated that the large uterine fibroids involved almost the entire anterior uterine wall with sparse normal myometrium left. This will aid the reader appreciate that uterine contractions may be abnormal; hence, a significant risk of labour dysfunction and complications such as postpartum haemorrhage. Additionally, it illustrates well that the conventional surgical approach to gain entry to the uterine cavity through the anterior uterine wall is extremely challenging due to limited space.

Ultrasound is an optimal imaging modality for detection and first assessment of uterine fibroids. Once large fibroids are identified, MRI plays a vital role in its characterization and informing pre-labour multidisciplinary discussion — general surgeons, interventional radiologists, anaesthetists, and neonatologists — and operative planning should a caesarean delivery be required. Nonetheless, a trial of labour should be considered in women with large fibroids and good fetal presentation.

Despite the unusually large uterine fibroids, the patient had an unremarkable labour and delivered vaginally a healthy female baby at term.

References

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