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LETTER TO EDITOR

Avoiding Radiological Diagnostic Errors in Pregnancy: Differentiating Myoma from Focal Myometrial Contractions

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Dear editor,

Myomas can pose serious risks in pregnancy, including complications such as increased likelihood of miscarriage, preterm labor, and labor obstruction. They are generally detected as well-circumscribed, hypoechoic masses on ultrasound, often accompanied by calcifications or degenerative changes.[1] Although real-time ultrasound usually identifies myomas adequately, difficulty arises when the appearance of the mass is ambiguous, especially when persistent focal thickening of the uterine wall is observed. The thickening could represent either a myoma or a focal uterine contraction, both of which appear similarly on standard B-mode ultrasound.[2]

We present the case of a G2P1L1 woman at 12 weeks of pregnancy who underwent a point-of-care obstetric ultrasound (POCUS). The ultrasound revealed a single live intrauterine pregnancy at 12 weeks, along with a 3x3 cm suspected mass in the posterior myometrium near the mid-cavity, which was thought to be a submucosal fibroid. A follow-up ultrasound was performed in the radiology department to confirm these findings. However, the repeat scan did not detect any submucosal fibroid. It was concluded that the previously noted structure was likely a focal myometrial contraction, which had resolved by the time of the second ultrasound, explaining its absence.

Myoma can be differentiated from focal myometrial contractions in pregnancy, by performing a repeat ultrasound examination after about 30 minutes. Contractions generally resolve over time, whereas myomas remain unchanged.[2,3] While a delayed ultrasound can distinguish contractions from myomas, color Doppler imaging can provide insight into the vascular patterns surrounding the mass. In cases of myomas, the blood vessels are splayed or displaced around the mass due to the mass effect of the myoma. In contrast, uterine contractions, which involves focal thickening of normal myometrial tissue, do not displace blood vessels.[4] Hence, color Doppler can be a valuable tool in identifying myomas and avoiding misdiagnosis. This vascular observation with color Doppler allows for more efficient differentiation between the two conditions, potentially eliminating the need for prolonged ultrasound sessions. This approach minimizes the need for repeat imaging and reduces the uncertainty in managing pregnancy-related complications caused by uterine myomas.[3,4]

Fig 1: Obstetric USG showing a suspected mass lesion in posterior myometrium

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In conclusion, effective method for distinguishing between myomas and uterine contractions in pregnant women include performing a repeat ultrasound after an interval of approximately 30 minutes along with the use of color Doppler imaging. Color Doppler provides a quick and reliable means of differentiation by highlighting unique vascular patterns associated with myomas. It is important for clinicians performing ultrasounds to be familiar with the techniques for distinguishing the two conditions to prevent misdiagnosis and ensure appropriate treatment planning for pregnant patients.

KEYWORDS

Myoma • Fibroid, Pregnancy • Myometrial Contractions • Radiological error

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