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Article type : Letter to Editor

## **Placental thickness in the lower uterine segment and invasive placentation: Will the promise live up?**

Sir,

We thank Takahashi and Matsubara<sup>1</sup> for the interest in our article in which it was demonstrated that the placental thickness in the lower uterine segment is increased in women with abnormally invasive, compared to those with normal placentation<sup>2</sup>.

Takahashi & Matsubara argue that measurement of the placental thickness can be difficult in cases of central placenta previa. To support their argument, they show MRI images of central placenta previa. We wrote about ultrasound images, and not MRI. We recommended that the maximum placental thickness in the lower uterine segment be measured. We acknowledge that the placental thickness may be variable at different parts of the placenta (Figure 1C and 1C' in the images shown by Takahashi & Matsubara). The maximum thickness should still be that, seen in figure 1 C'. In their letter, Takahashi and Matsubara showed images of the lower uterine segment in which the placenta appears obviously thick, in agreement with our hypothesis and findings

We agree that there is potential for bias with measuring placental thickness retrospectively on stored 2-D images, and indeed we have discussed these limitations in our paper. However, it has to be recognized that current prenatal diagnosis of placenta accreta spectrum disorders relies on subjective individual interpretation of visual sonographic findings or signs with two-dimensional (2D) grey-scale and colour Doppler imaging. Many signs have been reported in the literature with varying descriptions. Significant inter-observer variability in the diagnosis of invasive placentation has been reported when examiners were blinded to clinical data<sup>3, 4</sup>.

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The authors also raised concerns about the possible technical difficulties in the identification of the internal ostium by abdominal ultrasound. However, we believe it is unlikely that the fetal head obscures the depiction of the internal os, since in cases of placenta previa the fetal head is not engaged and thus should not impair the identification of the internal os.

We reported a simple, objective and pragmatic sign for the prediction of invasive placentation. Indeed, prospective studies are needed to validate these preliminary findings and we have made such recommendation in our paper. We hope that the combination of such an objective ultrasound measure, together with the history of previous Caesarean birth, will provide improved antenatal detection of invasive placentation disorders in the future.

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