Sono-histological findings of the placenta accreta spectrum

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Some pathologies of placenta accreta spectrum (PAS) are formed only in the thin tissues between the placenta and the uterine myometrium. In the case of placenta increta, we used a new ultra-high frequency linear probe (24 MHz) with Doppler imaging [Superb Micro-vascular Imaging (SMI), Canon medical systems, Japan] during operation. Herein, we compared ultrasound findings with pathologic findings of PAS.

A case of placenta previa located on the anterior uterine wall with previous cesarean scar complicated with placenta increta is demonstrated in Figures.

Ultrasoundography showed small vessels in the villous tree at the site without PAS. Although these peripheral vessels were homogenous and sharply diminished at the site without PAS, enlarged dull vessels were observed at the site with PAS. Placental images taken around these vessels shows low echogenicity without SMI Doppler signals. At the same site, pathologic findings confirmed the infarction of the peripheral villi.

Conclusion

This new probe can not only detect the thin myometrium with invasive placental tissue, but also the avascularity of the peripheral villous tree and congested stem vessels due to damaged peripheral villous vessels. Such a sono-histological evaluation might improve the accuracy of the diagnosis of PAS.