EP03.07. A case of cervical insufficiency; three-dimensional ultrasound for observations after intra-abdominal cervical isthmus cerclage.

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Introduction

In transvaginal uterine cervical cerclage, the patient is monitored postoperatively by direct observation of the sutures. However, the sutures cannot be observed directly after intra-abdominal cerclage of the cervical isthmus of the uterus. Although 2D US has conventionally been used for monitoring, the condition of the sutures is difficult to assess on 2D US. We have found that 3D image obtained using the Omniview technique with transvaginal 3D ultrasonography is useful for observing sutures after operation inside the abdominal cavity.

Case

A 31-year-old woman (gravida 2, para 1; 34 weeks’ gestation preterm delivery due to cervical insufficiency) presented to our hospital at 10 weeks’ gestation after having become pregnant spontaneously. She had been diagnosed as having cervical intraepithelial neoplasia and undergone conization at another hospital at age 30 years. Colposcopy at the initial examination revealed that almost none of the portio vaginalis remained, and the stump of the portio vaginalis was not in a graspable condition.

Figure 1. Although the sutures are brightly visualized in front of and behind the obstetrical internal os, they cannot be seen in their entirety.

Figure 2. Three-dimensional ultrasonogram showing the stich and knot (arrow) with circumferential sutures around the cervical canal ( * ) that are clearly visible at 15 weeks’ gestation(a) and 36 weeks’ gestation(b). This image was obtained by advanced VCI (6mm) with the Omniview technique using polyline tracing.

Therefore, transvaginal cerclage was not technically possible. Accordingly, laparoscopic cerclage of the cervical isthmus of the uterus was performed at 12 weeks’ gestation. Figure 1 shows a 2D US from 3 weeks after the procedure. Figure 2 shows a 3DUS. Her postoperative clinical course was uneventful. At 37 weeks’ gestation pland CS was performed. After delivery, suture was removed smoothly. Neonate was intact.

Conclusion

We conclude that because the sutures cannot be observed directly if cerclage is performed in the abdominal cavity, US is useful for the postoperative monitoring of their condition, such as the relationship between the stitch and cervical canal, and whether the suture is loose.