

LETTER TO THE EDITOR

Importance of understanding the operative procedures of the transverse uterine fundal incision, postoperative management, and patient education

To the Editor,

We read with great interest the article by Koshimizu et al.¹ because it alerted us to the fact that inappropriate management of subsequent pregnancy after transverse uterine fundal incision (TUPI) can be fatal to the mother and fetus. TUFI was originally reported as an operative procedure for cesarean delivery in mothers with placenta previa that widely covers the anterior uterine wall, when placenta accreta cannot be ruled out.² Since it was first reported, many mothers and fetuses have been saved by TUFI and we have reported its effectiveness.³ However, in their recent case report, Koshimizu et al.¹ did not describe any benefits of TUFI, and this might therefore mislead the readers into thinking that TUFI should not be performed because of great risks. We are concerned that the risks of TUFI are being over-emphasized to the readers by mentioning it with cardiac arrest and perimortem cesarean delivery.

However, considering these reports, TUFI indeed requires more careful attention to the risk of uterine rupture compared with traditional low-transverse cesarean section. Koshimizu et al.¹ point out that, with TUFI, evaluating the scar thickness at the uterine fundus becomes more difficult as the gravid uterus is enlarged in a subsequent pregnancy. We believe, however, that it is more important to ascertain whether these cases of uterine rupture were treated with appropriate surgical procedures and postoperative management. We recommend double-layer closure combined with retention sutures for TUFI wound closure.^{2,4} We also urge patients planning any future pregnancy to follow the postoperative management described.² Firstly, subsequent pregnancy is permitted after a period of 1 year with confirmation of no abnormalities on magnetic resonance imaging, hysterosalpingography, and sonohysterography. Secondly,

patients should be closely observed during the subsequent pregnancy and cared for in an intensive maternal care unit from 25 weeks of gestation onwards. Lastly, cesarean delivery should be performed between 34 and 35 weeks of gestation: after fetal lung maturation and before the onset of labor. Patients must be explicitly advised of the potential risk of uterine rupture and provide consent based on the management described above during the informed consent process.

The report by Koshimizu et al.¹ does not describe the uterine closure technique. Also, despite the severe scar defect revealed by magnetic resonance imaging at 12 months after TUFI, the patient conceived by in vitro fertilization, which we consider to be reckless and dangerous. They should have strongly been ordered to refrain from ever becoming pregnant. Non-compliance with contraceptive and hospitalization instructions resulted in serious consequences of uterine rupture and cardiac arrest. This suggests that this patient might not have undergone the proper surgical procedures and perhaps did not understand the importance of following the obstetrician's instructions, and consequently, that postoperative management was inadequate for the prospective subsequent pregnancy. We are afraid that the risks of this surgery are discussed in the context of anomalous cases as if they were routine TUFI cases. In order to verify the effectiveness and risks of TUFI, it is necessary to accumulate cases in which TUFI has been adequately performed as we recommended.

In conclusion, in performing TUFI, the surgeon must understand the purpose of this surgery as a last resort to save the lives of mothers and fetuses and use the appropriate wound closure methods. Cautious postoperative management is required, including patient education.

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AUTHOR CONTRIBUTIONS

Takashi Shibata: Writing – original draft; writing – review and editing. **Koji Nishijima:** Supervision; writing – original draft; writing – review and editing. **Hiroki Kato:** Writing – review and editing. **Satoshi Nakago:** Writing – review and editing. **Fumikazu Kotsuji:** Supervision.

KEYWORDS

cesarean section, pregnancy, transverse uterine fundal incision, uterine rupture

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest associated with this manuscript.

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Data sharing not applicable – no new data generated.

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