

MAVRIC: a multicentre randomized controlled trial of transabdominal vs transvaginal cervical cerclage



TO THE EDITORS: We read with great interest the article, MAVRIC: a multicentre randomized controlled trial of transabdominal vs transvaginal cervical cerclage¹ by Shennan et al. This is the first randomized controlled trial comparing abdominal cerclage with vaginal cerclage in patients with a prior failed vaginal cerclage.

We want to congratulate the authors with this accomplishment and highly appreciate their perseverance in completing this study. We were wondering why the abdominal cerclages were placed by laparotomy. Patients were included from 2008 through 2014. The laparoscopic technique of abdominal cerclages was first described in 1998.² In general, laparoscopy offers great benefits over laparotomy, such as less postoperative pain, shorter hospitalization, faster recovery, lower risk of thromboembolic events, and better cosmetic results.

Our retrospective multicentre study³ on preconceptional laparoscopic abdominal cerclages demonstrated favorable surgical and obstetric outcomes with a fetal survival rate of 90.0%. A systematic review⁴ compared surgical and obstetric outcomes between laparoscopic and laparotomic abdominal cerclages. The laparoscopic technique showed higher neonatal survival, higher rate of deliveries at >34 weeks of gestation, a lower rate of deliveries at 23.0–33.6 weeks of gestation with fewer second-trimester losses. Surgical outcomes were comparable.

We believe that in this era of minimally invasive surgery and the well-established great advantages of laparoscopy over laparotomy, the laparoscopic approach should be preferred in preconceptional abdominal cerclages. Laparoscopy is more challenging in pregnant patients because of the inability to use a uterine mobilizer, the size of the gravid uterus, the risk of bleeding, and conversion to laparotomy. We therefore prefer the laparoscopic approach before pregnancy. In pregnant patients, the laparoscopic technique can still be performed safely in the first trimester. During the second trimester, a laparoscopy is more challenging with a higher risk of conversion and a laparotomy could be considered.

The authors conclude that “implications for practice include the need to increase the availability of transabdominal cerclage for suitable women and the training of obstetricians in this uncommon practice.” We agree that more patients are eligible for abdominal cerclages than in current practice. But this does not mean that we should expose patients to two laparotomies if an effective, safe, and less invasive alternative is available. Given the learning curve, we believe that a close collaboration between obstetrician-gynecologists, who will identify patients who will benefit from an abdominal cerclage,

and minimally invasive gynecologists, who are trained to perform this surgery, is the key to the most beneficial and minimally invasive treatment. ■

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REFERENCES

1. Shennan A, Chandiramani M, Bennett P et al. MAVRIC: a multicentre randomised controlled trial of transabdominal versus transvaginal cervical cerclage. *Am J Obstet Gynecol*. 2019. <https://doi.org/10.1016/j.ajog.2019.09.040> [Epub ahead of print].
2. Scibetta JJ, Sanko SR, Phipps WR. Laparoscopic transabdominal cervicoisthmic cerclage. *Fertil Steril* 1998;69:161–3.
3. Burger NB, Einarsson JI, Brölmann HA, Vree FE, McElrath TF, Huirne JA. Preconceptional laparoscopic abdominal cerclage: a multi-center cohort study. *Am J Obstet Gynecol* 2012;207:273.e1–12.
4. Moawad GN, Tyan P, Bracke T, et al. Systematic review of transabdominal cerclage placed via laparoscopy for the prevention of preterm birth. *J Minim Invasive Gynecol* 2018;25:277–86.

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REPLY



The Multicentre Randomised Controlled Trial of Transabdominal Versus Transvaginal Cervical Cerclage (MAVRIC) trial allowed clinicians to perform open or laparoscopic procedures. It is interesting that none of the investigators in this UK national trial chose a laparoscopic approach.