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Twins with short cervix: hope ahead

V Berghella,[a] G Saccone[b]

[a] Department of Obstetrics and Gynecology, Division of Maternal-Fetal Medicine, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, PA, USA [b] Department of Neuroscience, Reproductive Sciences and Dentistry, School of Medicine, University of Naples Federico II, Naples, Italy

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As I often said, human beings were made to carry one baby at a time. Twin gestations, although seemingly exiting for both mothers and providers, are indeed associated with much higher complications for both mothers and babies. The most frequent and deadly of these complications is preterm birth (PTB). So the quest to decrease PTB in twins is an extremely important one. The best preventive measure for now is surely reducing the incidence of twins in the first place, through the better use of assisted reproductive techniques. This is because once a woman is carrying twins, nothing seems to work. The contribution from Jarde et al. to this issue of *BJOG* confirms this truth. Though a systematic review and meta-analysis of the literature, they showed that neither pessary, nor cerclage, nor vaginal progesterone prevented PTB in twins with a short transvaginal ultrasound (TVU) cervical length (CL). A few things should be highlighted.

First, most of the 23 randomised controlled trials (RCTs) in the meta-analysis included mostly 'unselected' twins. It appears to be true that unselected twin gestations do not benefit from vaginal progesterone, pessary, or cerclage. Any possible benefit came in subgroups with short TVU CL. Just 'throwing' an intervention at all twins with the hope of preventing PTB does not seem to work, and such RCTs should probably not be prioritised anymore.

Second, twins with prior PTB have not been studied separately and sufficiently for these three interventions of progesterone, cerclage, and pessary.

Third, the addition of short TVU CL to the risk factor of twins seemed to be helpful in identifying a subgroup of twins who could benefit from intervention. Unfortunately, TVU CL in twins only has ~40% sensitivity for PTB (Conde-Agudelo et al. *Am J Obstet Gynecol* 2010; 203:128.e1–12.). That is, 60% of twins have PTB without showing a short CL in the second-trimester screening. In contrast, TVU CL has a 70% sensitivity for PTB in singletons with both a prior PTB and a short TVU CL, and it's not surprising that in this population cerclage has been shown to be associated with a reduction in PTB (Berghella et al. *Obstet Gynecol.* 2011;117:663–71).

Fourth, in twins with a short TVU CL, vaginal progesterone seems to be for now the most promising intervention. Although Jarde et al. emphasise the possible benefit in secondary outcomes of this intervention in all twins, on a close reading of each related RCT the benefit of vaginal progesterone seems to come just in twins with a short TVU CL. These data confirm two prior meta-analyses on vaginal progesterone alone in twins with short CL (Schuit et al. *BJOG* 2015;122:27–37, Romero et al. *Am J Obstet Gynecol* 2012;206:124.e1–19). Most of the women included had a TVU CL of ≤25 mm.

Fifth, in twins with short TVU CL, a pessary has been reported to be beneficial in two RCTs (Liem et al *Lancet* 2013;382:1341–9 and Goya et al *Am J Obstet Gynecol.* 2016 Feb;214(2):145–52) and not beneficial in two other RCTs (Nicolaides et al *Am J Obstet Gynecol.* 2016;214:3.e1–9 and Berghella et al. *Ultrasound Obstet Gynecol*, 2017; doi: 10.1002/uog.17430); therefore, it remains unclear whether a pessary is beneficial in this population.

Finally, only 49 sets of twins with short CL have been included in RCTs of cerclage versus no cerclage (Saccone *Acta Obstet Gynecol Scand* 2015;94:352–8). Clearly more RCTs are needed to answer this question.

For now, we at our institution are continuing to perform RCTs in twins with a short TVU CL: we just finished a study on pessary [Berghella et al. *AJOG* 2017 (in press)], and are starting another on cerclage. Surely the completion and publication of the continuing RCTs on interventions for twins with a short TVU CL (Table S1) will soon revolutionise the management of twins.

Disclosure of interests

None declared. Completed disclosure of interests form available to view online as supporting information.

Supporting Information

Additional Supporting Information may be found in the online version of this article:

Table S1. Ongoing recruiting trials in prevention of preterm birth in twin pregnancies using progesterone, pessary, or cerclage. ■