**Women with prior preterm birth and short cervical length: to cerclage or not?**

**THE ISSUE:** Undeniably, the 2 major risk factors for preterm births, the bane of modern obstetrics, are history of spontaneous delivery <37 weeks and transvaginal cervical length <2.5 cm. A multicenter randomized clinical trial has evaluated the role of cerclage for women with these 2 risk factors and concluded that intervention is associated with improved outcomes. Despite the level I evidence for cerclage, there is controversy about when to cerclage and if 17-hydroxyprogesterone prophylaxis is sufficient.

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**Cerclage decreases preterm birth: finally the level I evidence is here**

Vincenzo Berghella, MD  
Department Obstetrics & Gynecology, Jefferson Medical College, Philadelphia, PA

Five randomized trials have assessed efficacy of cervical cerclage in prevention of preterm birth (PTB) in singleton gestations with prior PTB and a short cervical length (CL) <25 mm <24 weeks.1-5 The largest trial showed significant benefits in reducing PTB <24 weeks, <37 weeks, as well as perinatal mortality.6 There were trends for benefits for many other outcomes. A patient-level metaanalysis, including all these 5 trials, has shown significant reductions in PTB <35 weeks (by 30%), and in perinatal morbidity and mortality (by 36%). Twenty cerclages are needed to save 1 baby.6

These data represent level I data. Tests of heterogeneity and of quality all point to the efficacy of cerclage. Women with prior PTB with asymptomatic short CL <25 mm in singleton gestation with prior PTB may have a condition consistent with cervical insufficiency. Benefit of cerclage does make not only statistical but also clinical sense in this population. It is estimated that >6500 babies per year in the US alone would be saved by this management.6

The data prove that women with a singleton gestation and with prior spontaneous PTB (between 16-34 weeks) can be offered screening with transvaginal ultrasound CL starting at 16 weeks. This screening should continue every 2 weeks until 22 6/7 weeks, unless the CL is 25-29 mm, in which case weekly screening can be performed.5 If CL <25 mm is detected, the risks and benefits of cerclage should be discussed, and cerclage should be recommended for reducing the risk of recurrent PTB and of perinatal morbidity and mortality.

Women with prior spontaneous preterm birth should also be offered 17-alpha-hydroxy-progesterone caproate (17P) (continued)

**Women with prior preterm birth and short cervix: do NOT cerclage**

John T. Repke, MD, FACOG  
Department of Obstetrics and Gynecology, Penn State University College of Medicine, and Milton S. Hershey Medical Center, Hershey, PA

In February 2011, the Society for Maternal-Fetal Medicine, at its Annual Clinical Meeting, held a debate session. One of the topics debated was whether or not cerclage should be performed in women with a prior preterm birth and a short cervix on ultrasound. My position in that debate was the contrary one (no surprise to those who know me). Beyond a healthy skepticism the facts are needed in order to properly answer this question, so what are the facts?

If one considers obtaining a patient’s history as an “interview” then there is precedent regarding the uncertainty of information obtained in this way leading to a desire to use some more “objective” measure, in this case ultrasound. There are 2 key aspects of such an “objective” test, namely accuracy (or validity) and variability, reproducibility (or precision).1 Two ways to measure accuracy involve the measurement of sensitivity and specificity. With respect to ultrasonographically determined cervical length, the sensitivity is low as is the positive predictive value (9.3-25.7%).2 If one were to strictly apply epidemiologic principles to the dilemma of the short cervix and its possible association with preterm delivery the following conclusions could be reached:

1. The association may be more indirect than direct.
2. Consistency of association is lacking—frequently the case if a disease, in this case prematurity, is caused by multiple factors.
3. Strength of association is lacking—ie, the relative risks, especially in the groups with a cervical length <25 mm have been inconsistent.
4. Specificity of association is difficult to establish due to the multifactorial nature of preterm birth.
5. Degree of exposure, or so-called “dose response,” does seem to favor the short cervix as being involved in preterm birth since, as Iams et al3 has pointed out, the length of the (continued)
Dr Berghella (continued)

250 mg IM weekly from 16 to 36 weeks. The incidence of recurrent preterm birth <28 weeks in these women all taking 17P, if they develop CL <25 mm before 24 weeks, is 15% without and 9% with cerclage placed for the CL <25 mm.7 17P is not sufficient in women with prior preterm birth if they develop also a CL <25 mm, which is then an indication for cerclage.

REFERENCES

Dr Repke (continued)

cervix may (or should) be viewed as a continuum, and the data do suggest that as the cervix shortens (down to even 0 cm) the risk of preterm delivery increases.
Lastly, maternal-fetal medicine specialists are in a unique and uncomfortable position. We are the ones who take the history, perform the ultrasounds, recommend (and often perform) the cerclage, and for the latter 2 of these activities are reimbursed, so is it possible to be entirely objective when making recommendations? Who should be the final arbiter? My opinion is that it should be “us,” but prior to making cerclage “standard of care,” a phrase our legal colleagues use liberally, we owe it to ourselves and to our patients to await the results of well-powered clinical trials—a conclusion also reached by my esteemed colleague Dr Berghella in 2005.

REFERENCES