Can cerclage prevent preterm birth in women who have a short cervix?

**Often, it can—but only if they also have a singleton gestation and a history of spontaneous preterm birth.**

In this meta-analysis of 504 pregnant women who fit this description and who had a cervical length of less than 25 mm before 24 weeks of gestation, cerclage significantly reduced the incidence of preterm birth before 35 weeks’ gestation from 41% to 28% (relative risk [RR], 0.70; 95% confidence interval [CI], 0.55–0.89).

In the group of women who received cerclage, there were also substantial reductions in the rate of preterm birth before 37 weeks, 32 weeks, 28 weeks, and 24 weeks of gestation. And composite perinatal morbidity and death were significantly lower among infants born to women who underwent cerclage, compared with infants born to women who did not undergo the intervention (15.6% vs 24.8%; RR, 0.64; 95% CI, 0.45–0.91).


**EXPERT COMMENTARY**

John T. Repke, MD, University Professor and Chairman, Department of Obstetrics and Gynecology, Penn State University College of Medicine, and Obstetrician-Gynecologist-in-Chief, The Milton S. Hershey Medical Center, Hershey, Pa. Dr. Repke also serves on the OBG MANAGEMENT Board of Editors.

This meta-analysis by Berghella and colleagues adds to the debate about the role of cervical-length measurement in determining candidacy for cerclage in an effort to reduce the rate of preterm birth. The authors are clearly passionate about the prevention of preterm birth—as we all are—but the conclusions they reach must be questioned.

First, it is misleading to report these results as Level-1 evidence. A meta-analysis can never, strictly speaking, be Level-1 evidence, although it may be based on an analysis of Level-1 evidence.

Sound confusing? Let’s take, as an example, the study of the role of calcium supplementation in the prevention of preeclampsia. In JAMA, in 1996, a meta-analysis fairly conclusively demonstrated that calcium supplementation was effective in preventing...

CONTINUED ON PAGE 55
preeclampsia (odds ratio, 0.38; 95% CI, 0.22–0.65). Yet, a subsequent large randomized trial failed to confirm the findings of this meta-analysis.

The lesson here? Level-1 evidence consists of appropriately powered, large-scale, randomized clinical trials. To date, we lack such trials with respect to cervical-length measurement and indications for cerclage. In fact, two of the authors of this paper are “on the record” as saying this very thing.

A 2009 paper by Owen and coworkers demonstrated only that cerclage for a cervical length below 25 mm reduced preivable birth and perinatal death, but did not prevent births before 35 weeks unless the cervical length was less than 15 mm—and that bit of information came from a secondary analysis of the data. In a follow-up study, Owen and coworkers concluded that cervical length did not predict preterm birth before 37, 35, or 28 weeks, whether or not cervical length was viewed as a continuum or was stratified. And in an earlier meta-analysis reported by Berghella and associates in 2005, the authors conclude that “…cerclage may reduce preterm birth, and a well-powered trial should be carried out on this group of patients.”

References