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Practice Guidelines

ACOG Releases Bulletin on Managing Cervical Insufficiency

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The American College of Obstetricians and Gynecologists (ACOG) recently published a clinical management guideline on cervical insufficiency. The complete guideline, ACOG Practice Bulletin No. 48, appeared in the November 2003 issue of *Obstetrics and Gynecology*. This report includes evidence for screening asymptomatic at-risk women and offers management guidelines.

According to the National Center for Health Statistics, 23,000 discharge records from short-stay hospitals included the diagnosis of cervical incompetence in 2000. Diagnostic criteria remain elusive, and several surgical and nonsurgical treatments have been proposed.

Clinical Considerations and Recommendations

Is there a role for routine ultrasound screening of the cervix? Serial ultrasound assessments of the cervix in low-risk women have demonstrated low sensitivity and low positive-predictive values, meaning ultrasonography lacks enough discriminatory power to recommend routine use.

What is the role of ultrasonography in evaluating women who have had a previous pregnancy loss? Study results suggest that serial transvaginal ultrasound may be considered in women with a history of second- or early third-trimester deliveries. Because the upper portion of the cervix is not easily distinguished from the lower uterine segment in early pregnancy, these assessments should not begin before 16 to 20 weeks of gestation. According to ACOG, there is no reason to perform ultrasound screening for cervical insufficiency in women with a history of first-trimester pregnancy losses.

In whom is a cerclage indicated? In the past, patient selection for elective cerclage has been based on congenital or acquired visible defects in the ectocervix or classic features of cervical incompetence, which include history of two or more second-trimester pregnancy losses (excluding those resulting from preterm labor or abruption); history of losing each pregnancy at an earlier gestational age; history of painless cervical dilation of up to 4 to 6 cm; absence of clinical findings consistent with placental abruption; and history of cervical trauma caused by cone biopsy, intrapartum cervical lacerations, and excessive, forced cervical dilation during pregnancy termination.

Based on limited clinical information, elective cerclage for historical factors generally should be confined to patients with three or more otherwise unexplained second-trimester pregnancy losses or

preterm deliveries. Cerclage should be performed at 13 to 16 weeks of gestation after ultrasound evaluation has demonstrated the presence of a live fetus with no apparent anomalies.

Urgent, or therapeutic, cerclage often is recommended for women who have ultrasonographic changes consistent with a short cervix or evidence of funneling. Management of this group remains speculative because of the limited number of well-designed randomized trials. The decision to proceed with cerclage should be made with caution.

In the past, women who present with advanced cervical dilation in the absence of labor and abruption have been candidates for emergency cerclage. No randomized trials have been done in this area, and retrospective studies are limited by selection bias, inadequate patient numbers, and inconsistent selection criteria.

In the second trimester, how should a short cervix be treated? According to ACOG, if transvaginal ultrasonography before 16 to 20 weeks of gestation identifies a short cervix, the examination should be repeated because of the inability to adequately distinguish the cervix from the lower uterine segment in early pregnancy. Identification of a short cervix at or after 20 weeks of gestation should prompt assessment of the fetus for anomalies, uterine activity to rule out preterm labor, and maternal factors to rule out chorioamnionitis. Regular evaluations may be performed (particularly in patients with pelvic pressure, backache, or increased mucoid discharge) every few days to avoid missing rapid changes in cervical dilation or until the trend in cervical length can be characterized.

In patients with a history of fewer than three second-trimester pregnancy losses, urgent cerclage is not supported by evidence-based studies, and further transvaginal ultrasound surveillance may be the more judicious approach. Management for cervical shortening or funneling is unclear, and the decision to proceed with urgent cerclage should be made with caution. Cervical change noted before fetal viability is a better indication for cerclage than if it is identified after fetal viability has been achieved. Emergency cerclage may be considered in women if clinical chorioamnionitis or signs of labor are not present.

In the third trimester, how should a short cervix be treated? If the patient's cervical length is below the 10th percentile (25 mm) for gestational age at or after fetal viability, evaluation should include ultrasound assessment of fetal anatomy to exclude anomalies, tocodynamometry to detect the presence of uterine contractions, and assessment of maternal factors to exclude chorioamnionitis. If the patient is in labor, tocolytic therapy may delay delivery long enough to promote fetal lung maturation with maternal glucocorticoid therapy. The presence of chorioamnionitis is grounds for immediate delivery and the use of broad-spectrum antibiotics. If labor or chorioamnionitis is not present, modification of activity, pelvic rest, tobacco cessation, and expectant management may be considered. Cerclage in the treatment of women with cervical insufficiency after determining fetal viability has not been adequately assessed.

Is there a role for scheduled early or first-trimester cerclage in patients with a suspicious clinical history? The evidence-based risk-benefit ratio does not support first-trimester cerclage, even with transabdominal procedures.

Is cerclage placement associated with an increase in morbidity? Suture displacement, rupture of membranes, and chorioamnionitis are the most common complications associated with cerclage

placement, and incidence varies widely in relation to the timing and indications for the cerclage. Urgent and emergency cerclages are associated with a higher incidence of morbidity as a result of cervical shortening and exposure of the fetal membranes to the vaginal ecosystem.

Transabdominal cerclage can be complicated by rupture of membranes and chorioamnionitis. It carries the added risk of intraoperative hemorrhage from the uterine veins when the cerclage band is tunneled between the bifurcation of the uterine artery, as well as the known risks associated with laparotomy. Life-threatening complications of uterine rupture and maternal septicemia are extremely rare but have been reported with all types of cerclage.

Should perioperative antibiotics and tocolytics be used in association with cerclage placement? Studies using perioperative antibiotics have been small, nonrandomized, and inconclusive. The use of unnecessary antibiotics may lead to the development of resistant strains of bacteria and other morbidity for the patient and her fetus. No randomized studies have shown that use of tocolytic therapy after cerclage is effective. The lack of clear benefit for these adjunctive treatments suggests that these drugs should be used with caution.

Does a patient who was exposed to diethylstilbestrol require cerclage? To date, no definitive epidemiologic studies have proved that cervical insufficiency is more frequent in women exposed to diethylstilbestrol than in comparable control subjects. There are no randomized trials of cerclage in these patients. A woman who has been exposed may be evaluated using the same criteria as a nonexposed patient.

When is removal of cerclage indicated in a patient with preterm labor or preterm rupture of membranes? Because the available studies are small and nonrandomized, the optimal timing of cerclage removal is unclear, according to ACOG.

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