Cervical Length Measurement Predicts Preterm Delivery

BY SHERRY BOSCHERT
FROM THE ANNUAL MEETING OF THE AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS

SAN FRANCISCO — Adoption of a standardized form for use during deliveries involving shoulder dystocia significantly improved documentation of some information at one institution, according to Dr. Vasiliki A. Moragianni. A comparison of charts for 100 patients with deliveries involving shoulder dystocia before implementation of the standardized form in August 2003 and charts for 80 patients after adoption of the form found significant increases in the proportion of charts documenting the head-to-shoulder delivery interval and the estimated fetal weight.

Better documentation of shoulder dystocia cases could reduce legal risk, said Dr. Moragianni, whose presentation earned a second-place prize for clinical investigation at the meeting.

Before use of the form, 39 of 100 physicians (39%) documented estimated fetal weight, compared with 67 of 80 physicians (84%) after adoption of the form. The rate of documenting the head-to-shoulder delivery interval increased from 15 physicians (15%) in the earlier time period to 62 of 80 (77%) after adoption of the form.

The results show that adding a standardized form for shoulder dystocia cases improves documentation beyond what’s recorded in standardized delivery forms already in use, she said. The standardized form for shoulder dystocia improved documentation of an item already included in the delivery form (estimated fetal weight) and an item not previously included (head-to-shoulder delivery interval), reported Dr. Moragianni of Beth Israel Deaconess Medical Center, Boston.

The investigators selected charts from the 2% of deliveries that involve shoulder dystocia at Abington (Pa.) Memorial Hospital, where Dr. Moragianni completed her residency training. The new form included documentation of estimated fetal weight, umbilical cord pH, the maneuvers used in managing shoulder dystocia, the head-to-shoul-
der delivery interval, the duration of the second stage of labor, and estimated blood loss.

Except for the head-to-shoulder delivery interval and estimated fetal weight, documentation did not change significantly between the two time periods.

Documentation of maneuvers used for shoulder dystocia included the type and the order of maneuvers tried, and adjuncts to maneuvers, but not the exact timing of maneuvers. The form did include records of delivery times for the head and shoulders.

The study’s findings may be limited by the small number of cases, the retrospective design, and the concurrent “drills” for managing shoulder dystocia that were held at the hospital, she said.

The form might be improved by adding documentation of the team members involved in managing the case of shoulder dystocia and their training levels, the fetal head position (whether the presenting shoulder was anterior or posterior), and the condition of the infant’s arms immediately following surgery, Dr. Moragianni added.

“Every obstetrician in the hospital is completing the form,” she noted.

Shoulder dystocia was the third-leading cause of obstetric litigation in one analysis, accounting for 14% of obstetric lawsuits. Poor documentation drove 54% of these cases, which resulted in an average payout of $429,000 (Obstet Gynecol. 2008;112:1279-83), she noted.

Vitals

Major Finding: Before use of the form, 39% of physicians documented estimated fetal weight, compared with 84% after adoption. The rate of documenting the head-to-shoulder delivery interval increased from 15% in the earlier time period to 77% after adoption of the form.

Data Source: Comparison of records for 100 deliveries with shoulder dystocia before use of the standardized form and 80 deliveries with shoulder dystocia afterward at one institution.

Disclosures: None was reported.

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DR. MORAGIANNI

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A cervical length less than 30 mm as measured by the CerviLenz probe correlated with fetal fibronectin positivity and with preterm birth within 7 days, Dr. Richard M. Burwick reported at the meeting.

The sensitivity for preterm delivery within 7 days was 22% with a CerviLenz measurement of less than 30 mm and 40% with fetal fibronectin positivity. Specificity was 81% and 80%, respectively.

The positive predictive value for preterm delivery within 7 days was 22% with a CerviLenz measurement of less than 30 mm and 17% with fetal fibronectin positivity, and the negative predictive value was 97% in each group.

Both measures were less accurate in predicting delivery prior to 37 weeks’ gestation. Sensitivity was 29% with a CerviLenz measurement of vaginal cervical length less than 30 mm and 40% with fetal fibronectin positivity.

In asymptomatic women, cervical length was anterior or posterior, and the condition of the infant was considered.

“Symptomatic women with a CerviLenz cervical length of less than 30 mm should undergo further observation and consideration of tocolytic and maternal glucocorticoid therapy,” Dr. Burwick said.

Immediate and quantifiable measures for preterm delivery were positive in 12 (24%), and CerviLenz measurements were less than 30 mm in 9 of 43 patients (21%). The mean cervical length measurement was 34 mm. The cohort was predominantly Hispanic (38 patients), and 15 patients had a prior preterm birth.

Previous data have shown that only 21%-27% of women with symptoms of preterm labor will have preterm births. Cervical length and cervical effacement help assess preterm birth risk in symptomatic women.

In asymptomatic women, cervical length shorter than 25 mm has been linked to a sixfold increase in risk for preterm birth.

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