Determining a Threshold for Defining Oligohydramnios in a Low-Risk Population at Term

Joanne Quiñones MD, MSCE
Lehigh Valley Health Network, Joanne_N.Quinones@lvhn.org

Anthony O. Odibo MD

Marilyn Stringer PhD

Meredith L. Rochon MD
Lehigh Valley Health Network, Meredith_L.Rochon@lvhn.org

George A. Macones MD, MSCE

Follow this and additional works at: https://scholarlyworks.lvhn.org/obstetrics-gynecology

Part of the Obstetrics and Gynecology Commons

Published In/Presented At

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.
Abstract:

Objective: To determine if a certain level of amniotic fluid incidence found in low risk term pregnancies is predictive of adverse perinatal outcome.

Study Design: Prospective cohort study of patients at 37-40 weeks gestation during 2004-2008 at the Hospital of the University of Pennsylvania (n=195) and Lehigh Valley Health Network (n=113). Univariate and multivariate testing was otherwise not indicated.

Amniotic fluid was measured by the AFI 4-quadrant technique and was measured weekly until 40 weeks. Clinicians were blinded to the AFI levels except if the AFI level was less than 1 cm. AFI levels less than 1 cm were revealed to the clinicians if the patient was exactly 40 weeks gestation at the time of ultrasound.

Results: 308 patients met criteria for study analysis. Mean gestational age on admission was 39.8 weeks (range 37.2-41.6 weeks). Mean AFI measured closest to delivery was 11.4 (± 3.5 cm). 2% (n=6) had AFIs < 5 cm before delivery; 15.6% (n=48) had AFIs < 8 cm before delivery. 7.8% (n=24) of patients delivered a neonate with a positive FVI. There were no fetal or neonatal deaths. Mean AFI level was 10.2 (± 3.4 cm) among pregnancies with a positive FVI vs. 11.5 (± 3.5 cm) among those with a negative FVI. An AFI < 8 cm increased the risk of a positive FVI by almost 3-fold (risk ratio 2.70 [95% CI 1.2, 6.0]; p=0.01). Using an AFI cutoff of < 8 cm, the area under the receiver operating characteristics (ROC) curve was 0.59, with a sensitivity of 33.3% and a specificity of 85.8%.

Conclusions: In our prospective cohort study, an AFI cutoff of < 8 cm was associated with a significant increase in the risk of a positive FVI. Our data suggest that the incidental finding of low amniotic fluid in otherwise uncomplicated low risk patients may not be an indication for immediate delivery. AFI levels less than 5 cm were revealed to the clinician if the patient was exactly 40 weeks gestation at the time of ultrasound. AFI levels less than 5 cm were an indication for immediate delivery. Larger prospective studies are needed to further evaluate this question.