

risk of chromosome abnormality substantially outweighs the risk of fetal loss associated with amniocentesis.

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373 Cytomegalovirus infection in pregnancy: role of serial ultrasounds

Patrizia Vergani¹, Sara Ornaghi¹, Maria Verderio¹, Patrizia Ceruti², Ilaria Follera³, Francesca Maria Russo³, Silvia Malguzzi⁴

¹University of Milano-Bicocca, Obstetrics and Gynecology, Monza, Milan, Italy, ²University of Milano-Bicocca, Obstetric and Gynecology, Monza, Milan, Italy, ³University of Milano-Bicocca, Department of Obstetrics and Gynecology, Monza, Milan, Italy, ⁴University of Milano-Bicocca, Department of Neonatology, Monza, Milan, Italy

OBJECTIVE: To evaluate the effectiveness of ultrasound in the antenatal prediction of symptomatic congenital cytomegalovirus (CMV) infection.

STUDY DESIGN: A prospective study of women with primary CMV infection managed between 2000 and 2008 was performed. Primary CMV infection was defined: seroconversion to IgG positivity or anti-CMV IgG of low avidity with IgM. Serial targeted ultrasound examination was performed every fortnight until 24 weeks and every 4 weeks until delivery. Ultrasonographic markers of fetal infection were: brain calcifications, hydrocephaly, microcephaly, germinative cysts, ventricular dilatation, polymicrogyria hyperchogenic bowel, hepatomegaly, liver calcifications, IUGR, pericardial effusion, cardiomyopathy, ascite, enlarged placenta. Infection status was disclosed by viral isolation in urine, blood and saliva samples at birth or CMV tissue inclusions at placental histological exam or fetal autopsy. Neonatal follow-up included up to one year after delivery. Cross-tabs were used to calculate sensitivities, specificities, and positive and negative predictive values of ultrasound vs symptomatic congenital infection.

RESULTS: A total of 88 women were included in the study, whose 26 were seroconversions. 11 cases were lost at follow up. There were 20 (24%) neonates with congenital CMV infection, in which 6 (33%) were symptomatic at 1-year-life follow-up. Table 1 shows comparison between symptomatic infected (ill) and asymptomatic infected and non infected (healthy) neonates.

CONCLUSION: Serial ultrasound identify 67% of symptomatic fetuses at risk of severe sequelae with a NPV of 98%.

Table 1

US finding	Symptomatic infection	Asymptomatic infection	Sensistivity (%)	Specificity (%)	PPV (%)	NPV (%)
Abnormal	4	2	67	98	67	98
Normal	2	80				
Total	6	82				

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374 Cidex OPA effectively eradicates bacteria after 5 minutes

Marium Holland¹, Susan Ramin¹, Karen Bishop¹, Joan Mastrobattista²

¹University of Texas Health Science Center at Houston, Houston, Texas,

²University of Texas Health Science Center Houston, Houston, Texas

OBJECTIVE: Currently, 12 minute Cidex OPA (ortho-phthalaldehyde) soak times are recommended for sterilization of transvaginal (TV) ultrasound probes. However, there is no data to support this timing in the literature. Our objective was to determine the optimal Cidex soak time for adequate sterilization of transvaginal (TV) probes.

STUDY DESIGN: Sterile water solutions of Group B streptococcus (GBS), *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and methicillin-resistant staphylococcus aureus (MRSA) were prepared to a McFarland standard of 0.5 (maximum bacterial concentrations of 34×10^7 /mL). Probes were soaked for 12 minutes in Cidex OPA, then washed with soap and water. Clean probes were

swabbed to verify the absence of bacterial contamination. Probes were inoculated with 1 mL of bacterial solution and swabbed to verify the presence of the bacteria. Probes were then soaked in Cidex OPA for 5, 7, 10, 12, 15 or 20 minute intervals. At the end of each time period, probes were swabbed and plated again for evaluation of any remaining contaminant. This procedure was repeated three times for each bacterial type. All culture swabs were plated on blood agar and allowed to grow at 37 °C for 48 hours according to standard laboratory practice, after which the colony forming units were counted.

RESULTS: Bacterial growth was seen immediately following probe inoculation in all cases. No growth was seen for GBS, MRSA, *Klebsiella* or *Pseudomonas* following Cidex OPA soak times of 5 minutes or longer. There was minimal growth of *E. coli* at a 10 minute soak time (1 colony), likely a plate contaminant, as no growth was seen at 5 or 7 minutes.

CONCLUSION: Our data suggest that Cidex OPA soak times of 5 minutes appear sufficient to sterilize a TV probe of most pathogens. However, additional testing is needed to confirm this data.

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375 Ductus venosus flow velocity waveforms indices and arterial cord pH in IUGR fetuses delivered at 32 weeks

Juan De Leon-Luis¹, Giancarlo Mari², Jacques Samson², Robert Egerman², Yinka Oyelese², Rebecca Uhlmann², Joaquin Santolaya²

¹Hospital General Universitario Gregorio Maranon, Department of Obstetrics and Gynecology, Madrid, Spain, ²University of Tennessee Health Science Center, Memphis, Tennessee

OBJECTIVE: In IUGR fetuses, an abnormal ductus venosus (DV) Doppler is considered an ominous sign because it is thought to be related to irreversible decompensation and acidemia. Several indices have been described to quantify DV Doppler waveforms: a) pulsatility index (PI); b) a-wave reversed flow (RF); and, c) SIA index [peak systolic velocity/(isovolumetric relaxation + a-wave)]. The aim of this study was to determine which index is more highly correlated with acidemia at birth.

STUDY DESIGN: Thirty-five IUGR fetuses (EFW < 10th percentile and abnormal umbilical artery PI) were delivered between 23.1 and 32 weeks' gestation (median: 27.3 weeks). An abnormal DV Doppler was not considered an indication for delivery. The PI, the RF, and the SIA indices were correlated with the perinatal death and the arterial cord pH determined at birth, which was considered abnormal if the value was < 7.10 and/or if the base deficit was < -9.0 (2 SD below the mean for preterm neonates). We also determined the sensitivity and specificity for each index for perinatal death or acidemia.

RESULTS: All fetuses were delivered by cesarean section. Indications for delivery were non-reassuring fetal testing or maternal indications in 26 cases and lack of interval growth in 2 fetuses. There were 7 IUFDs. Birth weights ranged from 282 to 1245 grams (median: 530 grams). One fetus had an abnormal pH and 10 also had an abnormal base deficit. The RF had the best sensitivity (73%, CI: 55-95% vs. 61%, CI: 47-81%) and the SIA index had the best specificity (95%, CI: 77-99% vs. 78%, CI: 58-90%). The PI had the worst sensitivity and specificity of the three indices.

CONCLUSION: Our data suggest that DV RF has the best sensitivity for perinatal death or acidemia, while the SIA index has the best specificity. Both the RF and the SIA index should be considered as part of the standard evaluation of IUGR fetuses.

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