

INTRODUCTION: Our objective was to evaluate the ability of a pad containing an immunoassay for alpha-fetoprotein (AFP) to detect amniotic fluid (AF) leakage to serve as a rapid and simple one-step bedside test.

METHODS: A prospective cohort study. Pads containing a qualitative immunoassay for AFP (detection threshold of 20 ng/mL) were used. The study group was pads worn by 200 pregnant women with confirmed rupture of membranes. Three controls were evaluated: 1) Pads worn by 70 pregnant women with intact membranes who had no vaginal bleeding; 2) Additional pads instilled with urine specimens obtained from the 270 women described above (200 cases and the 70 women in group 1); 3) Pads instilled with semen collected from 40 men seen in an infertility clinic.

RESULTS: All 200 pads that absorbed AF had positive results. Among the pads from the 70 women with intact membranes, only 36 absorbed a sufficient amount of normal vaginal discharge to activate the colorimetric reaction, and they all had negative results. The colorimetric reaction was either not activated or failed to complete in the remaining 34 pads. All 270 pads that absorbed urine, and all 40 pads with semen, had negative results.

CONCLUSION: A qualitative immunoassay for AFP, embedded in a pad, appears to be a reliable bedside test for distinguishing amniotic fluid leakage from normal vaginal discharge, urine, or semen. This assay, based on the same principle as a home urine pregnancy test, has the potential to be a rapid and simple one-step bedside or home test for ROM.

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Twin-Twin Transfusion Syndrome Confers Persistent Morbidity and Mortality: A Community-Based Cohort [261]

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INTRODUCTION: Selective fetoscopic laser photocoagulation (SFLP) for pregnancies complicated by twin-twin transfusion syndrome (TTTS) has improved outcomes for this morbid condition. Our objective was to describe the obstetric and neonatal outcomes of pregnancies complicated by TTTS in a community-based cohort.

METHODS: We retrospectively studied all diamniotic monochorionic (DiMo) twin sets evaluated between 2011–2014 at the perinatal center of Mercy Hospital St. Louis, a suburban referral center that performs 8,000 deliveries annually. Individual chart review was performed using our electronic health record.

RESULTS: 65 DiMo twin sets were identified. TTTS was diagnosed in 25 (38%) of DiMo pregnancies, of which 23 (92%) were Caucasian and 19 (76%) privately insured. TTTS severity by Quintero stage in N (%): 4 (16) stage 1, 4 (16) stage 2, 10 (42) stage 3, 2 (8) stage 4, 5 (21) stage 5. The gestational age at diagnosis was 19.5 ± 4.6 weeks (mean \pm SD). One pregnancy was electively terminated. 9 (41%) pregnancies had demise of one or both fetuses and 2 (9%) had neonatal demise. Of pregnancies with a live birth, gestational age was 28 ± 6 weeks (mean \pm SD) and 11 (44%) resulted in hospital discharge of two live infants. 13 (52%) patients underwent SFLP at outside centers, following which the following complications developed (n): demise of one twin (2), monoamniocity (2), preterm labor (5), abruption (2), PPRM (7).

CONCLUSION: Despite improving treatments for TTTS, obstetric outcomes for this condition in our high-resource community setting remain poor.

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Presence of "Sludge" Does Not Justify the Need for Amniocentesis to Rule Out Infection in Patients With a Short Cervix [271]

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INTRODUCTION: Previously we found that biomarkers for infection at the time of cervical cerclage were similar between patients (pts) with Intra-amniotic "sludge" (IAS), an ultrasound (US) finding of hyperechoic matter in amniotic fluid (AF) close to the internal os, and without IAS. We aim to find if addition of 23 pts to previously reported 41 pts changes the result.

METHODS: Record of 64 consecutive pts who underwent a high MacDonald cerclage between 16–24 6/7 weeks (wks) for a sonographically short Cx (<25 mm) from 2007–2015, performed or supervised by a single operator (FB) were evaluated. Transvaginal US images prior to cerclage evaluated for Cx length and presence or absence of IAS. AF collected at the time of cerclage (transabdominal amniocentesis) evaluated for presence of infection by culture, Gram stain (GS), glucose (Glu), red (RBC), and white blood cell (WBC) count.

RESULTS: 36 of 64 pts (56%) had IAS, 28 (43%) did not. All culture and GS were negative. No differences between groups were detected with regards to Glu, ($P=.48$), RBC ($P=.44$) or WBC ($P=.85$). Pregnancy outcomes were similar in terms of gestational age (GA) at delivery. Baseline Cx lengths were similar between groups. Cerclage occurred at slightly earlier GA and patients were slightly older for the IAS Group.

CONCLUSION: IAS does not indicate the presence of infection. The presence of IAS in asymptomatic pts with sonographically short Cx at mid-trimester does not constitute an indication for an amniocentesis to rule out IA infection or increased risk for premature birth.

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Seroprevalence of Chagas' Disease in Pregnancy and Congenital Transmission of *Trypanosoma cruzi* in Maceió, Brazil [281]

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INTRODUCTION: Prenatal diagnosis and management of *Trypanosoma cruzi* infection can significantly reduce its associated morbidity and mortality and contribute to the eradication of Chagas' disease. The objective of this study is to explore the seroprevalence of this parasite among pregnant women attending antenatal care in public health facilities in Maceió, Brazil.

METHODS: A cross-sectional study was conducted with pregnant women attending primary care units for antenatal care between June 2007 and May 2012. Analyses of medical records and mandatory notification data were performed for serologically confirmed patients with *T. cruzi* infection and their offspring. Measures of central tendency and dispersion were calculated and analysis of variance was used to identify the discrepancy between obstetric variables and serologic results.

RESULTS: A total of 54,813 pregnant women participated and the prevalence Chagas' disease was 0.12%. Compared with non-infected patients (mean [SD] age: 28.8 [6.14] years), the infected group (30.2 [7.6] years) had a higher incidence of spontaneous abortion (52% versus 34% of pregnant women; $P=.0185$). The chagasic patients' mean gestational age at first antenatal visit was 17.1 ± 7.6 weeks. Four (5.9%) of them had syphilis; however, no other co-infection was reported. Only 42.6% (29) of the infants from the infected mothers underwent diagnostic examinations, all of them with negative results.

CONCLUSION: Chagas' disease is associated with poor maternal and fetal outcomes. Vertical transmission may occur in any part of the world, resulting from increasing population mobility; hence well-established surveillance programs are warranted -which involves testing pregnant women at risk of infection and all children born to seropositive mothers.

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