



CLINICAL YIELD OF FETAL ECHOCARDIOGRAPHY FOR SUBOPTIMAL CARDIAC VISUALIZATION ON OBSTETRIC ULTRASOUND

Poster Contributions
Poster Hall, Hall C
Sunday, March 19, 2017, 9:45 a.m.-10:30 a.m.

Session Title: Congenital Heart Disease: Novel Insights in Pediatric Cardiology
Abstract Category: 10. Congenital Heart Disease: Pediatric
Presentation Number: 1271-020

Authors: *Rick Vavolizza, Pe'er Dar, Barrie Suskin, Robert Moore, Kenan Stern, Department of Pediatrics, Division of Cardiology, Children's Hospital at Montefiore, Bronx, NY, USA*

Background: Suboptimal cardiac imaging on obstetric ultrasound is a frequent referral indication for fetal echocardiography, even in the absence of typical risk factors for fetal cardiac disease. The clinical profile of patients and yield of examinations performed for such an indication are not well defined. Given the increased cost, time and resource utilization of fetal echocardiography, we sought to determine the clinical yield of such referrals.

Methods: Single-center retrospective review of referrals from January 2010 – June 2016 for fetal echocardiography for suboptimal views of fetal cardiac anatomy on obstetric ultrasound. Patients with commonly accepted indications for fetal echocardiography were excluded. Demographic variables and echocardiogram findings were collected. Clinical yield was classified as (1) 'normal,' if no structural or functional abnormalities were noted; (2) 'indeterminate,' if minor pathology couldn't confidently be excluded (though significant pathology was not suspected); (3) 'abnormal,' if there was pathology.

Results: In total, 583 gestations were included (median gestational age 23.3 weeks, range 19.0 – 38.4). The median BMI was 34.6 kg/m² (range 17.2 – 66.3). The majority of women were obese (BMI > 30 kg/m² in 74.6% and > 40 kg/m² in 30.1%). The largest proportion of referral indications referenced maternal body habitus (47.2%). Difficult imaging was noted in 66% of the fetal echocardiogram reports. Fetal echocardiograms were repeated at least once in 76/562 patients (13.5%). Overall, 540 of 583 examinations (92.6%) were normal. Definitive pathology was noted in 10 patients (1.7%), three of who had confirmed critical congenital heart defects. In the remaining 33 (5.7%), no anomalies were noted but possible minor abnormalities could not be confidently excluded.

Conclusions: We found a cardiac anomaly rate of 1.7% in women referred for limited cardiac imaging on obstetric scan. Albeit low, this rate is higher than background rates of neonatal congenital heart disease. Fetal echocardiography for this indication may therefore be reasonable; however, improved cardiac screening procedures could result in a lower referral rate and higher clinical yield.