THE ROLE OF ANTI-RO/SSA ANTIBODY LEVEL IN CONGENITAL HEART BLOCK AND POSSIBLE BENEFIT OF MATERNAL THERAPY WITH ANTI-INFLAMMATORY AGENTS

ACC Moderated Poster Contributions
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Background: Despite an improved understanding regarding the role of anti-Ro antibodies in the development of congenital heart block, clinical management of mothers with rheumatologic disease and their fetuses remains challenging. The association between heart block and semi-quantitative anti-Ro antibody level, presence of maternal factors that may reduce disease burden and appropriate frequency of fetal echocardiographic screening are areas that require further clarification.

Methods: We conducted a retrospective review examining the pregnancies of mothers who were positive for anti-Ro antibodies followed at Duke Hospital from 2007-2011. All outpatient clinic notes, fetal echocardiograms, and semi-quantitative levels of maternal anti-Ro antibodies were reviewed. Infant outcomes were also assessed. Association between fetal heart block and maternal anti-Ro level was assessed by the Wilcoxon Rank Sum test. Odds ratios for maternal treatment with low-dose anti-inflammatory agents were computed in the standard fashion.

Results: 33 women were managed throughout pregnancy. 18% of fetuses (n=6) developed atrioventricular block of any degree with all degrees of fetal heart block represented. Two additional patients were referred to our institution with preexisting complete fetal heart block. There was no significant difference in semi-quantitative maternal anti-Ro antibody level in pregnancies complicated by fetal heart block versus those that maintained normal conduction. 94% of the infants maintained normal conduction when the mother was treated with hydroxychloroquine or daily prednisone therapy throughout the pregnancy, compared to 56% in the untreated group (odds ratio: 0.09; 95% CI: 0.002, 0.84; p-value: 0.02).

Conclusion: In this cohort, pregnancies complicated by fetal heart block did not have a significantly higher level of maternal anti-Ro antibodies. Maternal treatment with either hydroxychloroquine or daily, low-dose prednisone throughout pregnancy may provide a protective effect.