

Pulsed and tissue Doppler derived Tei indices in fetuses with maternal antibodies to the intracellular ribonucleoproteins

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Objectives: This study compared the changes in pulsed Doppler (PD)- and tissue Doppler imagine (TDI)-derived Tei indices in fetuses whose mothers had positive anti-SSA-Ro or SSB-La antibodies and in a control group.

Methods: We enrolled 11 fetuses with positive maternal antibodies for SSA-Ro or SSB-La and 48 fetuses with a structurally normal heart (based on echocardiographic findings) as a control group. Mean gestational age was 25.0 ± 5.5 weeks in the maternal antibody-positive group and 27.5 ± 6.5 in the control group ($P=0.310$). Mean maternal age was 26.0 ± 3.5 years in the antibody-positive group and 27.0 ± 4.5 years in the control group ($P=0.292$).

Results: Mitral and tricuspid PD- and TDI-Tei indices were calculated in both groups. In the mitral valve, mean PD-derived Tei index was 0.51 ± 0.11 in the antibody-positive group and 0.59 ± 0.05 in the control group ($P=0.586$). In the tricuspid, these indices were 0.53 ± 0.12 in the antibody-positive group and 0.53 ± 0.12 in the control group ($P=0.876$). Mean TDI-derived Tei indes in the mitral valve was 0.58 ± 0.05 in the antibody-positive group and 0.55 ± 0.09 in the control group ($P=0.321$). These indices for the tricuspid valve were 0.56 ± 0.05 in the antibody-positive group and 0.55 ± 0.08 in the control group ($P=0.861$). No statistically significant differences between groups were found between PD-Tei and TDI-Tei indices for the mitral or tricuspid valves of two groups, consequently.

Conclusions: The Tei indices did not reveal any myocardial dysfunction in the fetuses of mothers with positive anti-SSA-Ro or SSB-La antibodies.