

Assessed by modified Doppler myocardial performance index in the Egyptian population

Ali A, Okasha A, Elsirgany S, Abdel-Rasheed M, Khalil A, El-Anwary S, Elsheikhah A
Fetal Medicine Unit Cairo University, Cairo, Egypt

Objective

To develop gestational age-based reference ranges for the modified Doppler myocardial performance index (Mod MPI) and to examine the maternal characteristics that affect this measurement.

Methods

This was a cross-sectional study, comprised of 1021 healthy pregnancies between 20⁺⁰ to 35⁺⁶ weeks' gestation. They were all undergoing ultrasound examination in Cairo Fetal Medicine Unit (CAIFM) in Cairo University, Egypt from 1st April 2017 till 1st April 2019. Mod MPI was obtained used method described by Friedman et al. (2003). Median and SD models were fitted between Mod MPI and gestational age. The distributions of Mod MPI Z-scores were examined in relation to maternal characteristics.

Results

The normal Mod MPI in second and third trimester (20 + 1 to 35 + 6 weeks' gestation) was 0.408 0.08. Mod MPI was not affected by maternal age, body mass index (BMI) or parity (p value 0.5, 0.6 and 0.2 respectively).

Conclusion

This study established normal reference ranges for Mod MPI according to gestational age and generated a graph with 5th, 10th, 90th and 95th centiles. Maternal characteristics as age, BMI or parity do not affect value of Mod MPI.