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EP08.04 Measurable structural and functional cardiovascular adaptations in fetuses exposed to increased maternal adiposity at 24–28 weeks' gestation



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Sub-Topic: 05. Fetal heart



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OBJECTIVES

To assess the effect of maternal body fat composition on fetal cardiac structure and function.



2 METHODS



99
Singleton
Pregnancies



24–28
Weeks'
Gestation



Ultrasound
Fetal Cardiac
Assessment

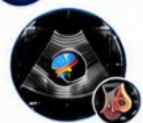


Maternal Body
Fat Composition
(DXA)



Fetal Cardiac
Parameters

3 RESULTS



↑ Interventricular
Septal Thickness



↓ Heart
Sphericity Index
(Altered Geometry)



↑ Visceral Fat Index
→ ↑ TEI Index
(Subclinical Dysfunction)



↓ Basal Metabolic Rate
→ ↓ Stroke Volume



McGoen Index
Inversely Modified by
Fat Mass

★ KEY FINDINGS



Greater maternal protein mass
→ ↑ interventricular septal thickness.



Lower heart sphericity index
→ altered geometry.



Higher visceral fat index
→ higher TEI index.



Basal metabolic rate
→ negatively correlated
with stroke volume.



McGoen index
→ inversely modified by fat mass.



Maternal adiposity shapes fetal cardiac structure and function even in mid-gestation.



5 CONCLUSIONS



Maternal adiposity significantly influences fetal cardiac morphology and function in mid-gestation.

