

[EP09.04] Feasibility of third trimester fetal echocardiography in women with obesity: a preliminary analysis within the OMEGA-STEM Trial

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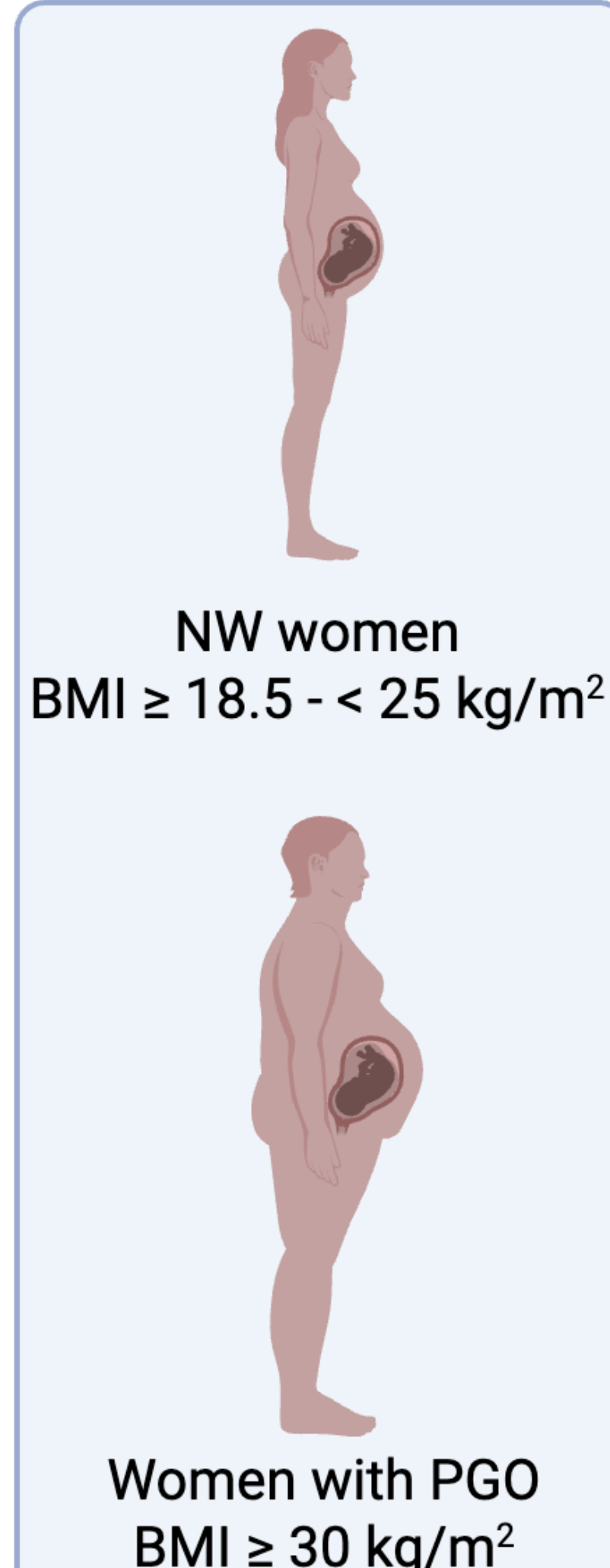


Introduction

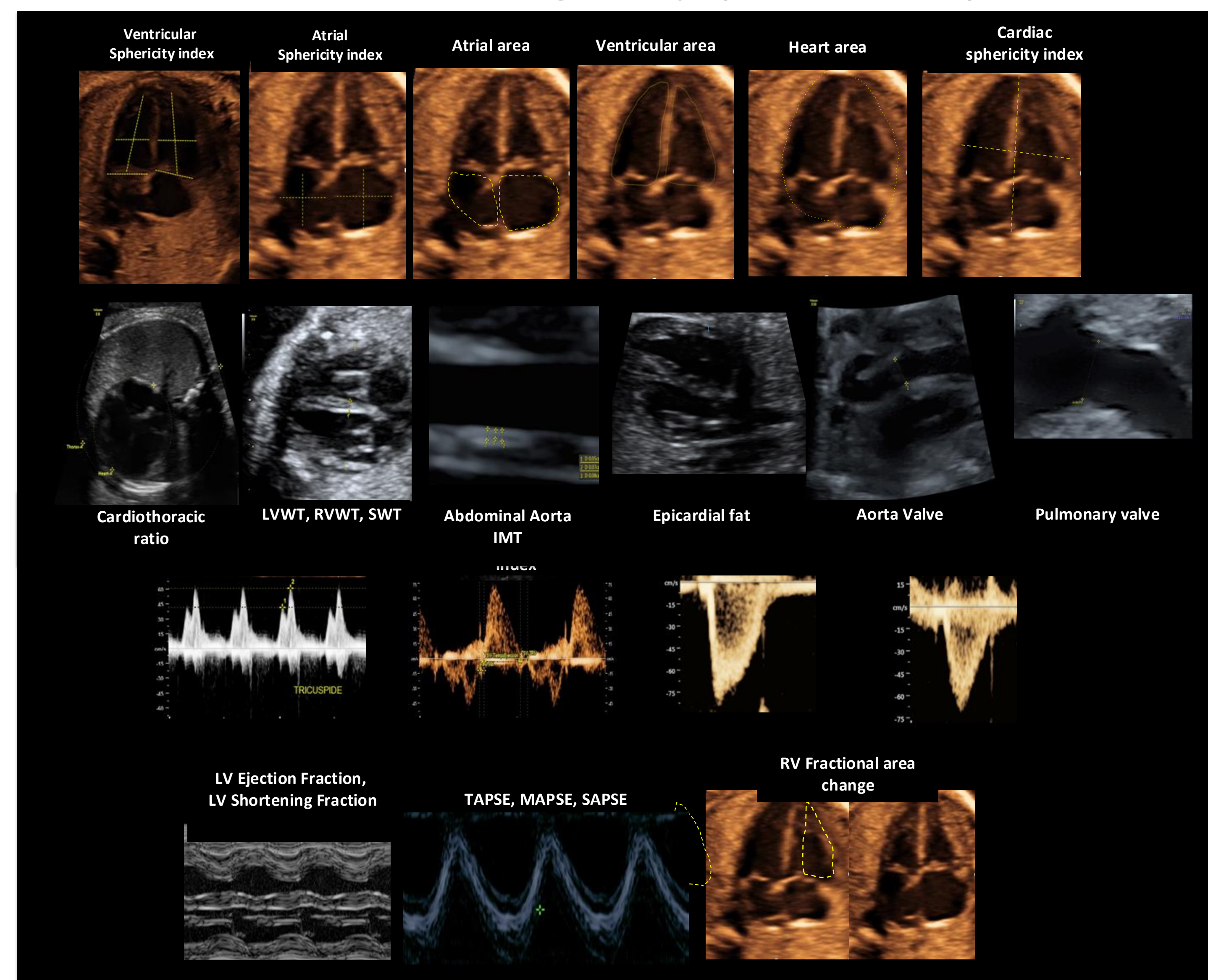
Maternal obesity is a risk factor for the developmental origin of cardiovascular disease in the offspring. We aimed to assess the **feasibility of third trimester fetal echocardiography** in pregnant women with **pregestational obesity (PGO)**, evaluating imaging success rates and acquisition times within the OMEGA-STEM trial (NCT06981676)

Methods

Recruitment
(< 14 weeks)



Echocardiography (32w – 36w)



Results

- **70 fetal echocardiograms** performed (20 PGO, 50 controls).
- **Gestational age at assessment:** 33.5 ± 1.2 w (controls) vs. 32.9 ± 3.5 w (PGO).
- **Estimated fetal weight & Doppler evaluations:** obtained in 100% of participants.
- **Success rates:**
 - Apical/basal 4-chamber, outflow tracts, E/A ratios, MPI, aortic IMT → **100%**
 - Lateral 4-chamber and epicardial fat thickness → **94.3% (66/70)**
 - TAPSE, MAPSE, SAPSE → **91.4% (64/70)**
- **All unsuccessful acquisitions occurred in the PGO group.**
- **Mean exam duration:** 33.2 ± 2.5 min (controls) vs. 39 ± 6.2 min (PGO) $p < .05$

Conclusion

These findings demonstrate that third-trimester fetal echocardiography is **feasible** in women with pregestational obesity and provide a basis to evaluate the impact of maternal obesity on fetal cardiovascular development