[P04.11] Increased fetal Pulse Wave Velocity and Pulse Pressure in growth-restricted fetuses with heart-sparing effect

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Introduction / Background

Increased coronary blood flow signal in fetal growth restriction is assumed to be heart-sparing effect (HS). Ultrasonic 'phased tracking method' (PTM) enables non-invasive measurements of pulse wave velocity (PWV) and pulse pressure (PP).

Objectives

We aim to PWV and PP in FGR cases with or without HS.

Methods

Forty-six growth-restricted fetuses were enrolled. We employed directional power Doppler to recognize the blood flow in distal right coronary artery (dRCA) at the 1/3 of the apex side of the right ventricular free wall. Pulsed Doppler examination was added to prove the diastolic dominant flow velocity. PTM was used for measurement of PWV. PP was estimated from PWV and maximum flow velocity in descending aorta using formula of Water-hammer.

Conclusions

Increased PWV and PP in cases with demonstrated dRCA flow signals suggested elevated diastolic pressure and pulse pressure in them.