Conclusions: We present new reference charts for prenatal assessment of AH of the lateral ventricles assessed in coronal plane using 3D-MPR. These charts can be helpful for evaluation of fetal brain abnormalities affecting ventricular size and shape.

Objectives: To construct fetal reference charts for dimensions of anterior horns (AH) of the lateral ventricle and to apply these charts to cases with ventricular abnormalities.

Methods: The reference charts were based on the AH measurements in low risk pregnancies, assessed in the coronal head plane by three-dimensional multiplanar sonographic reconstruction (3D-MPR). The AH measurements were performed in the coronal plane at the level of foramen of Monro.

The measurements included: AH width (AHW), AH height (AHH), AH axial length (AHAL), AH absolute width (AHAW), AH angle (AHA) assessed between vertical head axis and AH axis, and AH index (AHAW/AHAL).

Results: The measurement of AHW and AHAL didn’t change through pregnancy. AHH, AHAW and AHI get smaller with advance in gestational age and AHA rise through pregnancy.

AHA, AHAL and AWH were below the 5th percentile for gestational age in cases with complete agenesis of corpus callosum and AHW, AHH, AHAL, and AHAW above 95th percentile, typically associated with irregular contour of the affected AH in cases with periventricular clastic lesion of anterior horns.