

The normal development of the cave of septum pellucidum - A fetal MRI study

Katorza E, Kertes I, Hoffman D, Yahal O, Berkenstadt M, Hoffmann C, Bar-Yosef O
Chaim Sheba Medical Center, Tel-Hashomer, Ramat-Gan, Israel

Objective

The cave of septum pellucidum (CSP) is an important landmark in the evaluation of the fetal neural axis. A normal CSP provides reassurance of normal central forebrain development. The purpose of this study was to determine the normal values for the measurements of the fetal CSP on MRI.

Methods

We retrospectively examined 307 MRI scans of fetuses between 25 and 41 weeks gestation. Data was collected from the medical records of patients who underwent fetal MR imaging at the Sheba Medical Center.

Results

The values of the mean and the reference range [approximated value of the 95% limits ($\approx 1.96SD$)] for each gestational age (GA) group in each measurement are presented in table and graph forms.

Conclusion

Today, there are charts that provide normal values for the width of the CSP in fetal ultrasound, but there are no such charts for fetal MRI. A deviation from the ultrasonic normal values is associated with unfavorable outcomes; therefore, knowing the normal values for MRI could provide valuable information for researchers and in the decision-making process of both clinicians and parents.