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**Introduction**

- Cavum septi pellucidi (CSP) is a fluid-filled cavity between two thin membranes which usually become fused to septum pellucidum in late gestation or early postnatal period.
- The CSP is visible around 16 weeks as an anechoic rectangular box along the axial planes.
- Prenatal ultrasonographic finding of CSP is an important landmark to evaluate the fetal brain and its visualization convinces of normal central forebrain development.
- Invisible CSP is rarely isolated and typically associated with other central nervous system (CNS) malformations such as holoprosencephaly, agenesis of the corpus callosum (ACC), severe hydrocephaly and septo-optic dysplasia (SOD).
- We report 4 of 20 cases about absent CSP which were suspected with prenatal ultrasonography and confirmed postnatally.

**Case reports**

- We found two cases of ACC in prenatal ultrasonography. In these cases, CSP and corpus callosum were not observed. Other ultrasonographic findings such as non-visualization of pericallosal artery using Doppler in sagittal view, disproportionate enlargement of the occipital horns of lateral ventricles known as tear-drop sign (Fig. 1) and ventriculomegaly helped to investigate ACC. Two conditions were confirmed by postpartum brain ultrasonography and magnetic resonance imaging (MRI).
- In two patients, no visible CSP and a normal corpus callosum suggested isolated absent CSP vs. SOD. One patient with absent CSP: a “point down” appearance of the lateral ventricular frontal horns on coronal image (Fig 2) suggested possible SOD. Postnatal brain ultrasonography and MRI also suggested SOD. In a second patient demonstrated isolated absent CSP by prenatal ultrasonography and fetal MRI showing absent CSP with intact optic nerve (Fig 3). The 2 days after birth, evaluation with brain MRI also confirmed isolated absence of CSP.

**Conclusion**

- Our report provided informative examples for differential diagnosis of absent CSP.
- If an abnormality of CSP is identified, stepwise visualization of the corpus callosum and optic nerve is needed.
- The findings an optic tract and downward-pointing anterior wall of lateral ventricles on ultrasonography are feasible to differentiate isolated absent CSP with SOD.
- MRI also could be supportive to allow more definitive diagnosis.