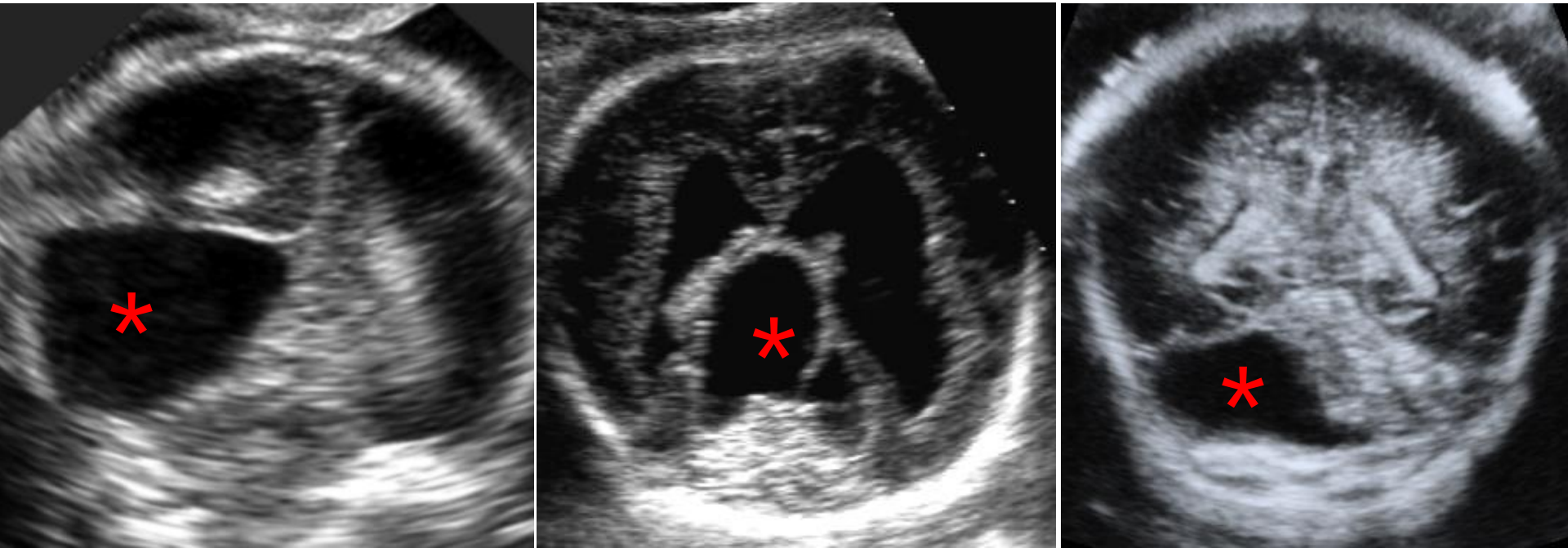
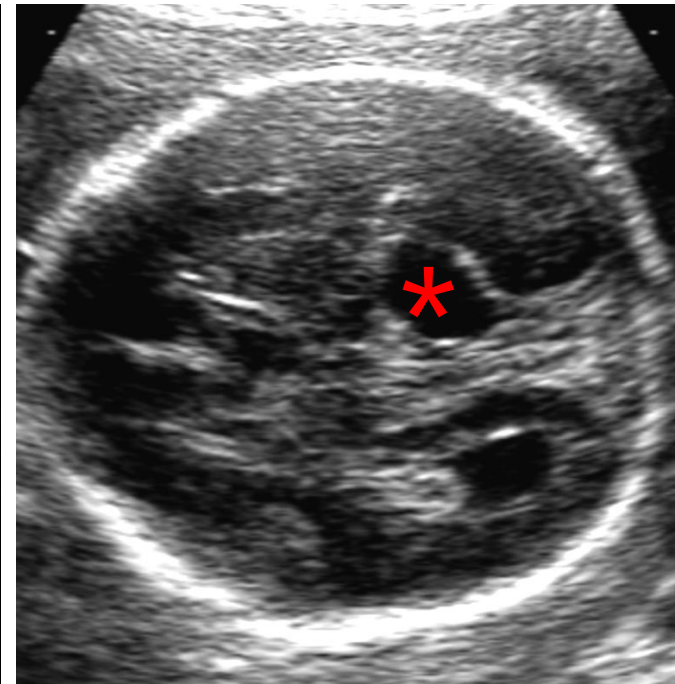
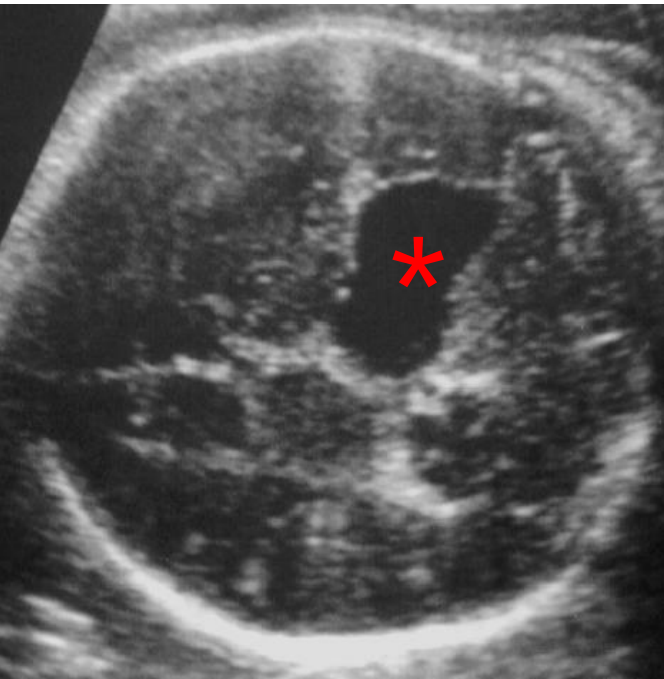


Intracranial cysts



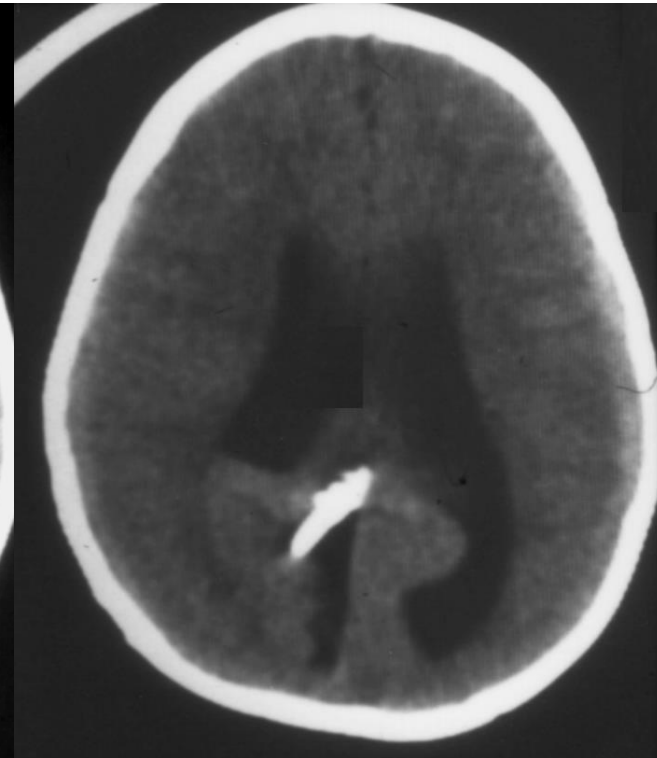
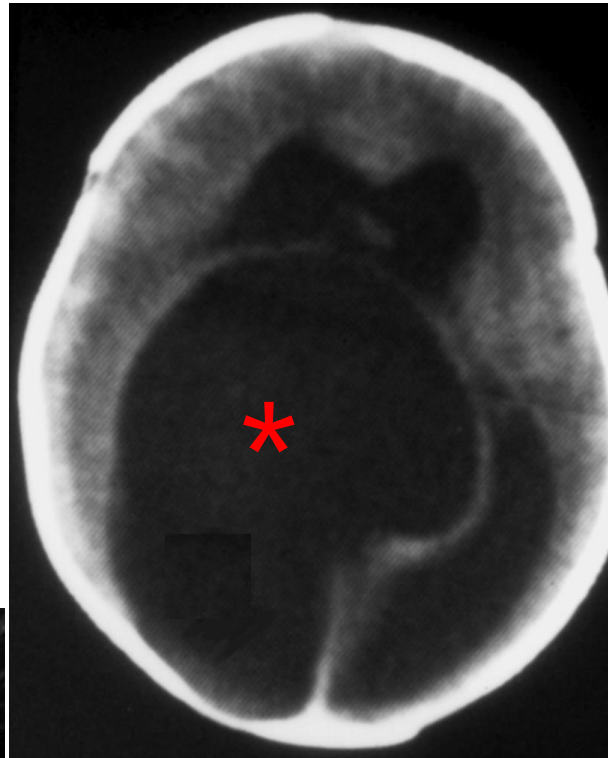
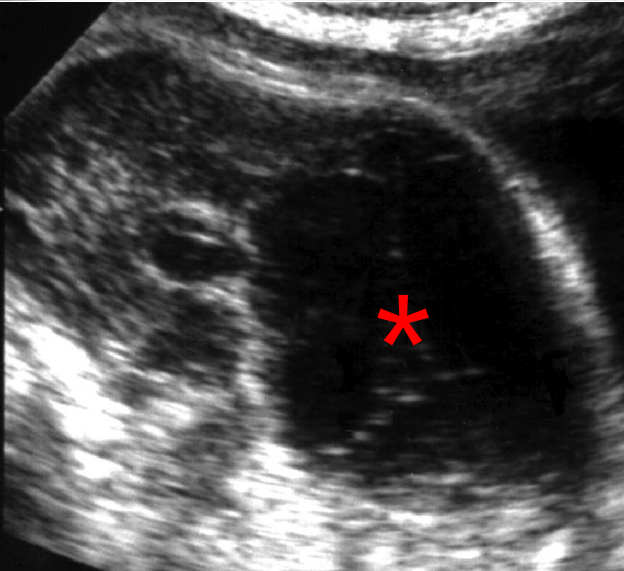
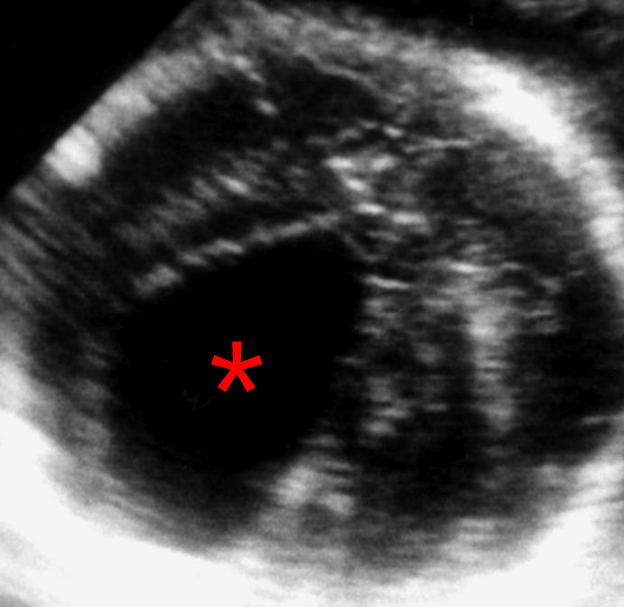
Intracranial cysts are fluid accumulations with thin walls, usually unilocular, with a mass effect on the brain. They may occur externally to the hemispheres, on the midline or in the posterior fossa

Intracranial cysts have variable size



Intracranial cysts may vary considerably in size: in some cases they are small and do not exert significant compression on the adjacent brain structures

Large intracranial cyst requiring postnatal drainage

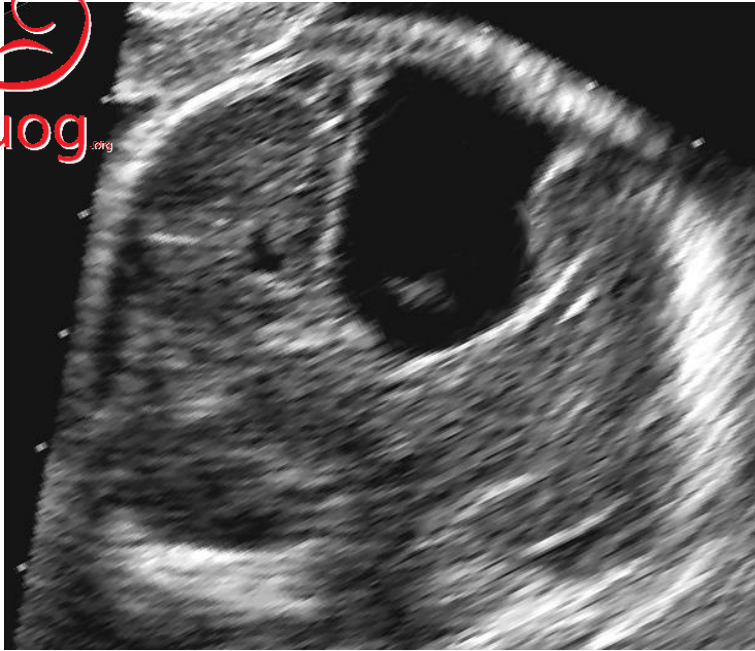


In some cases however they may be extremely large, cause intracranial hypertension and/or obstructive hydrocephalus and therefore require surgical correction after birth

Intrauterine evolution of intracranial cysts



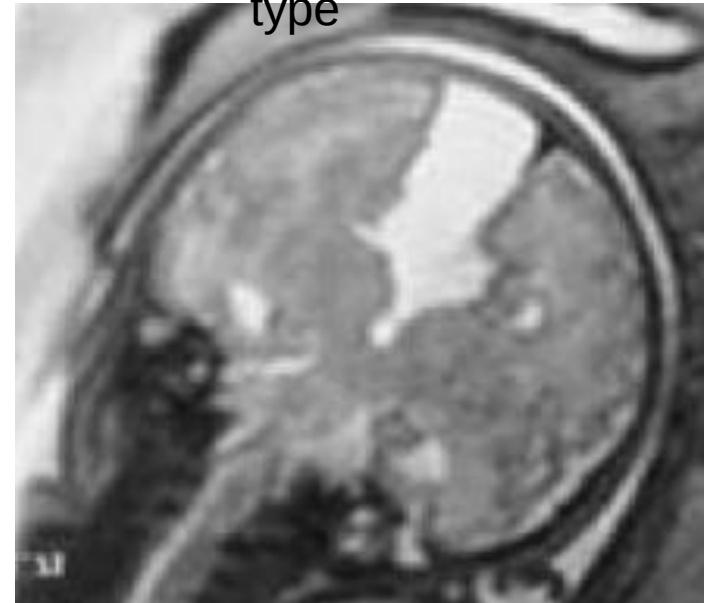
Progressive enlargement of intracranial cysts is frequently observed



Images by G. Pilu

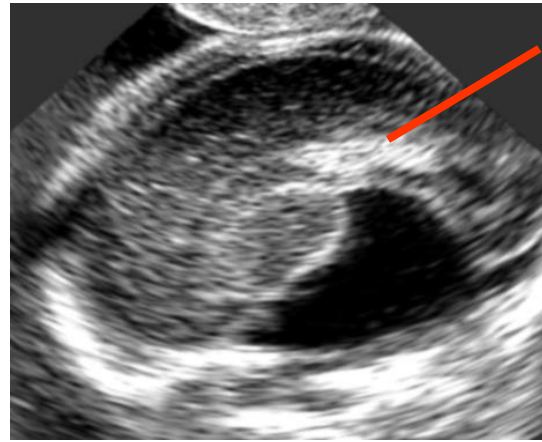
Interhemispheric cyst and agenesis of corpus callosum

Fetal intracranial cyst are usually arachnoid cysts, and are most frequently isolated findings. Those occurring in the anterior interhemispheric fissure however may be associated with agenesis or dysgenesis of the corpus callosum and in these cases are of the glio-ependymal type



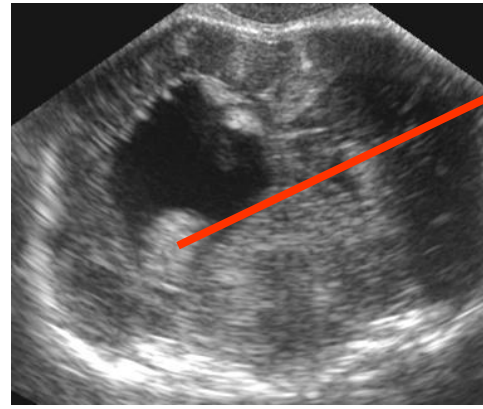
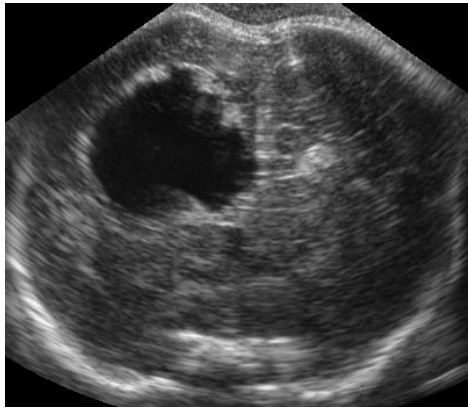
Reproduced by Blaicher et al: *Ultrasound Obstet Gynecol* 2001; 18:166-168

Differential diagnosis



Lateral ventricle

Arachnoid cyst

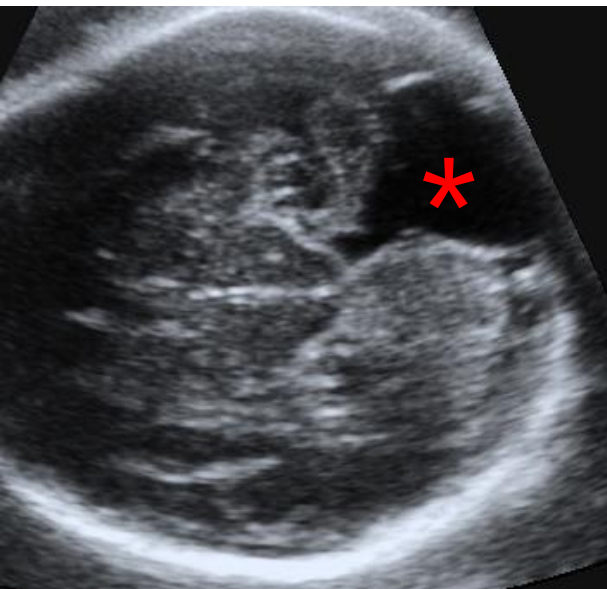


Choroid plexus

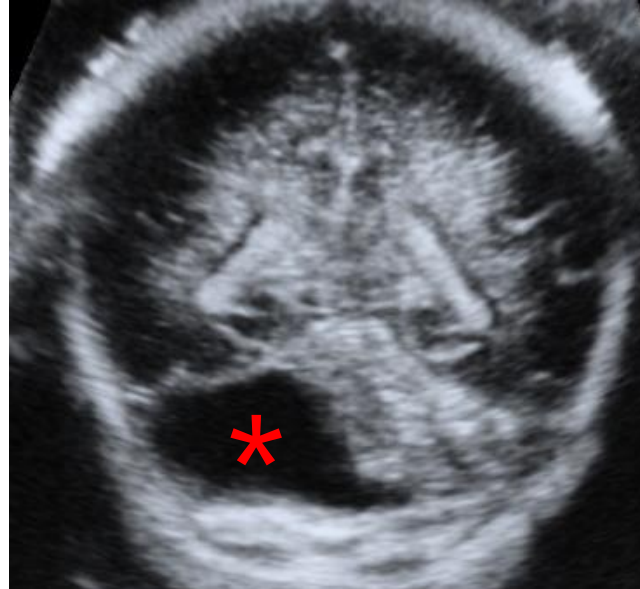
Porencephaly

Differential diagnosis of arachnoid cysts includes porencephaly. Distinction may be difficult. Multiplanar sonography is required to demonstrate whether the cyst is external with a mass effect on the brain (arachnoid) or is located inside the cortex and communicate with lateral ventricles, subarachnoid space or both (porencephaly)

Differential diagnosis: megacisterna magna



Posterior fossa arachnoid cyst



Megacisterna magna

Differentiating megacisterna magna from a posterior fossa cyst is difficult and may be impossible at times: a cyst is favoured when an asymmetric mass effect is noted

Differential diagnosis: blood collections



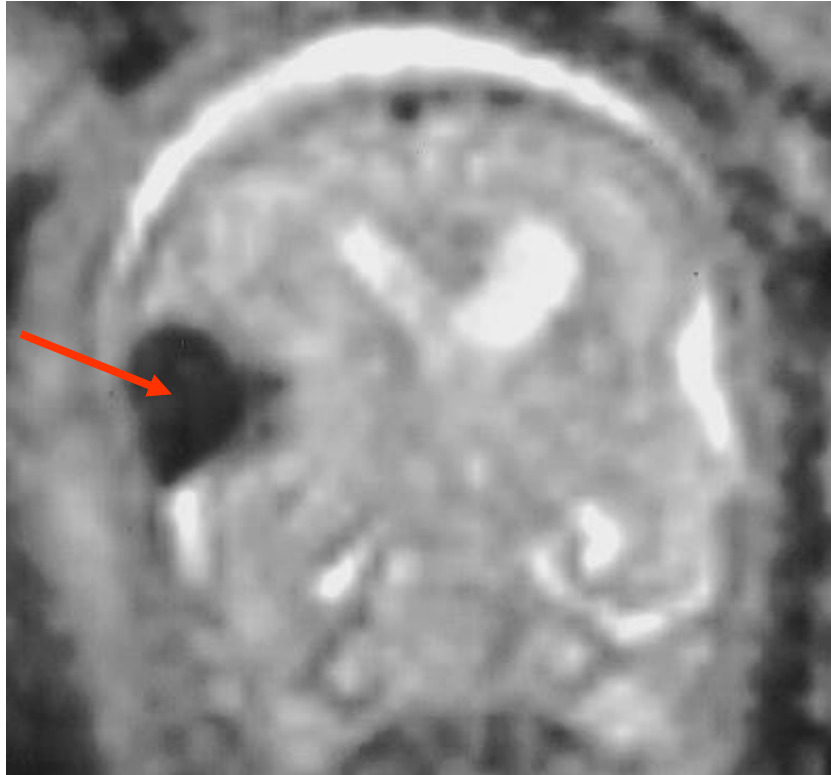
Subdural hematoma



Thrombosis of the torcular Herophili

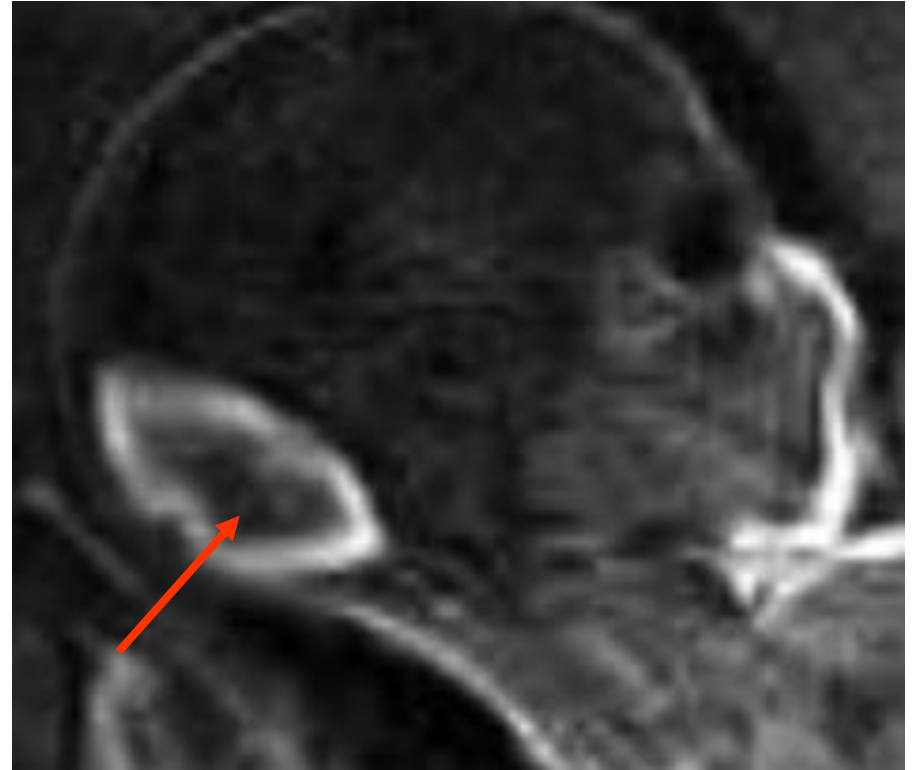
Blood collections in the cranial cavity may result from subdural hematomas and thrombosis of the torcular Herophili; in these cases usually the fluid appears dense and corpuscolated

Differential diagnosis: blood collections



Subdural hematoma

From: Meagher SE et al: *Ultrasound Obstet Gynecol* 2002; 20: 296–298



Torcular thrombosis

From: Laurichesse H et al: *Ultrasound Obstet Gynecol* 2008; 32: 188-198

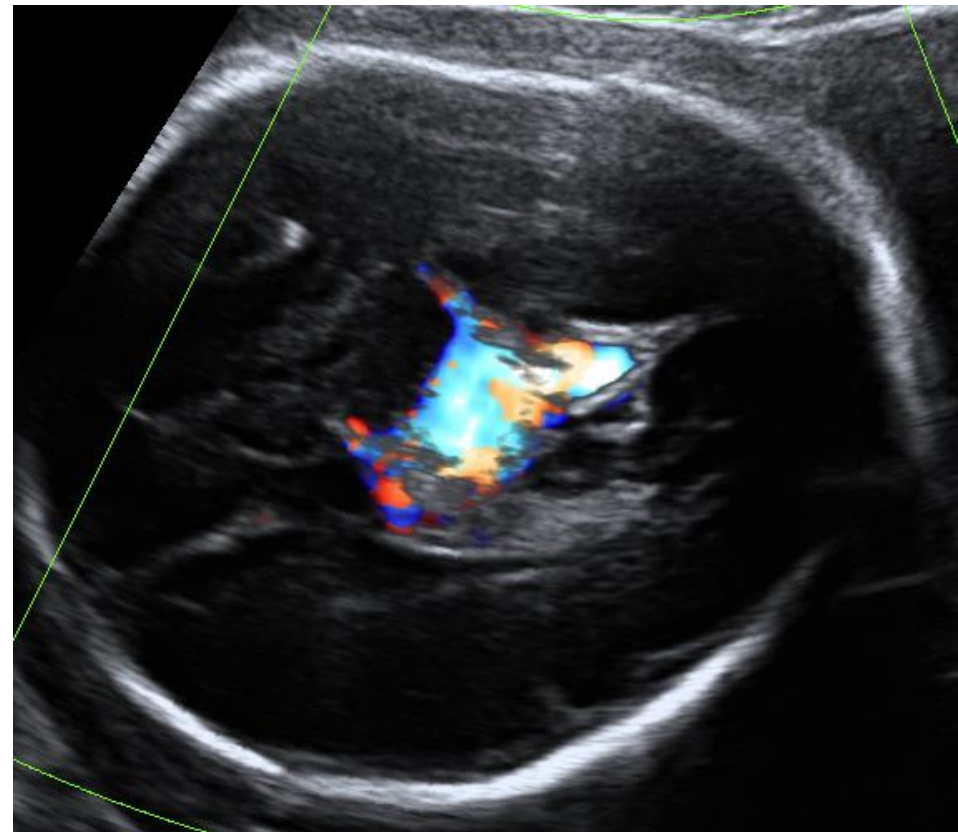
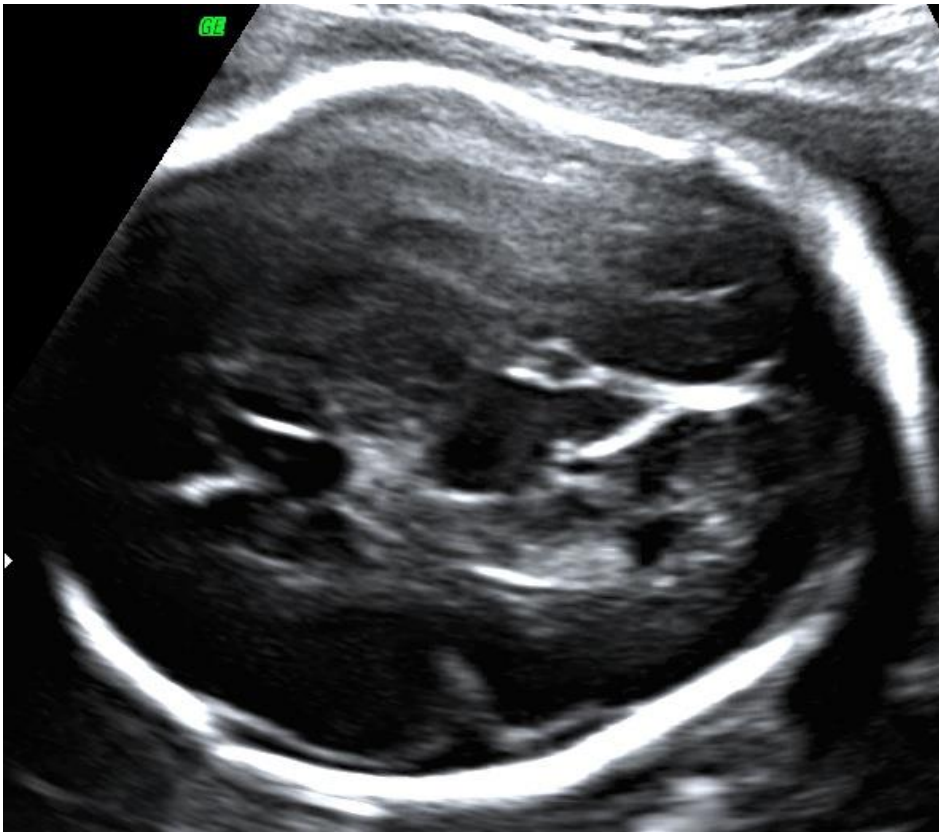
In dubious cases MR may be helpful: T1 weighted sequence reveal typical signals from blood collections

Differential diagnosis: intracranial tumors



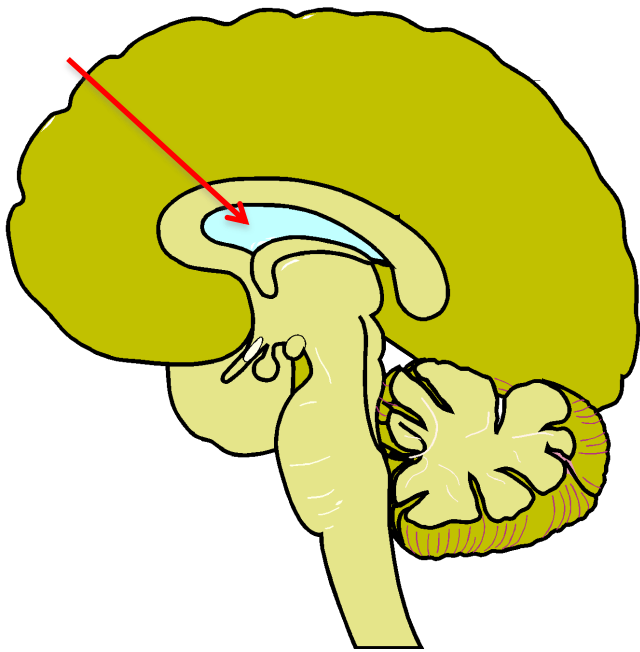
Intracranial tumors may contain cystic areas but usually are associated with major derangements of intracranial anatomy

Differential diagnosis: vascular malformations

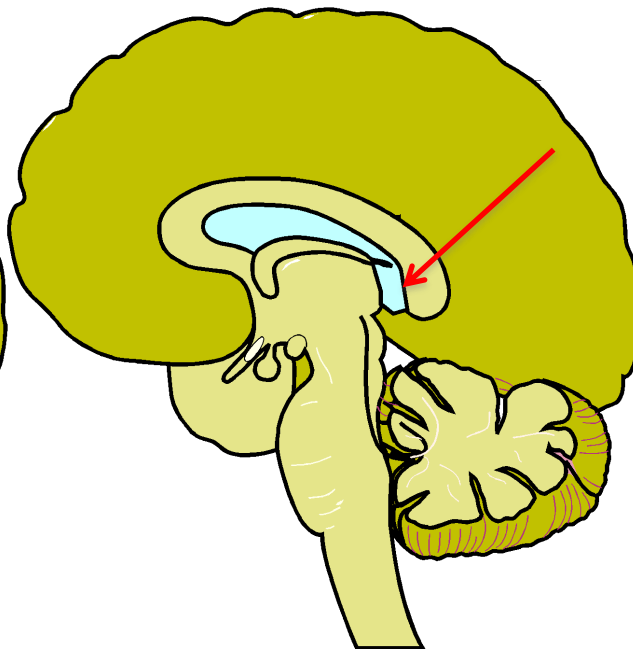


Vascular malformations such as vein of Galen aneurysms and pial arterovenous malformations appear as sonolucic collections but are easily identified by the demonstration of blood flow with color and pulsed Doppler

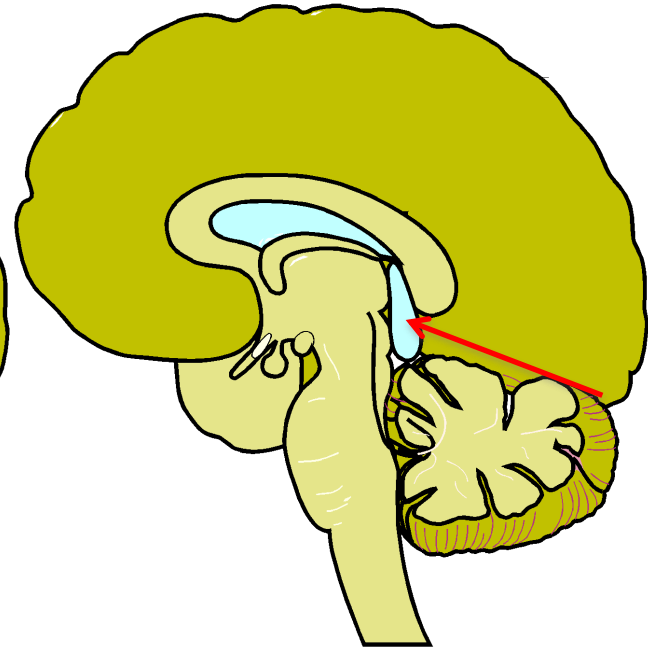
Differential diagnosis of intracranial cysts: the normal midline fluid-filled structures



Cavum septi pellucidi:
Fluid filled cavity caudad to
corpus callosum



Cavum Vergae:
In continuity with cavum
septi pellucidi



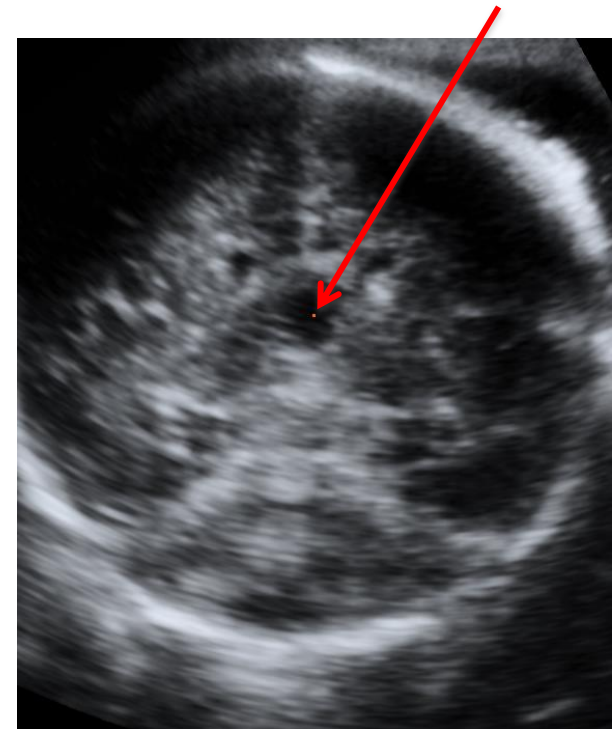
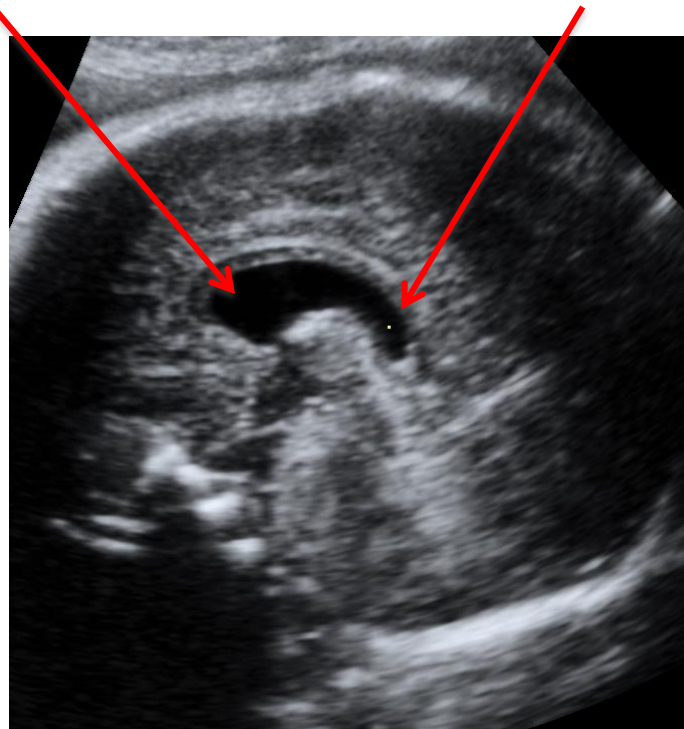
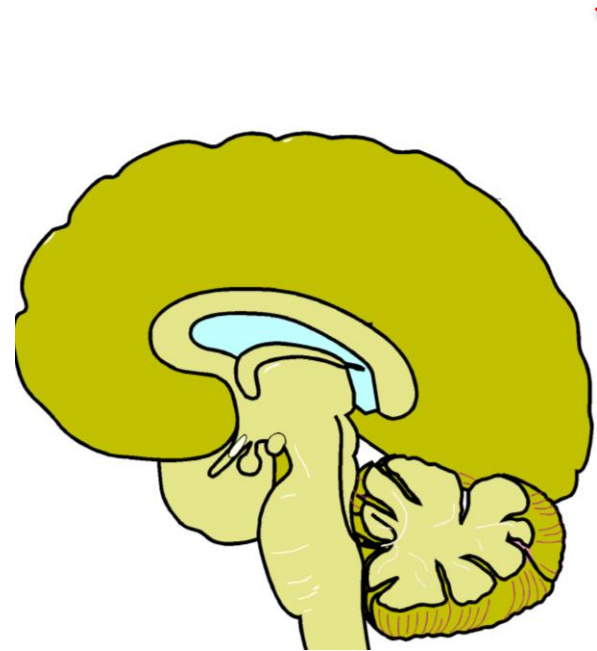
Cavum veli interpositi
Posterior to corpus
callosum and separate
from cavum septi
pellucidi/Vergae

Cavum septi pellucidi and cavum Vergae

Cavum septi pellucidi

Cavum Vergae

Cavum Vergae



Cavum veli interpositi

