CNS Videos

Normal Fetal CNS.

Anencephaly.

Spina Bifida.

Encephalocele.

Holoprosencephaly.

Septo-Optic Dysplasia.

Ventriculomegaly.

Hydrocephalus.

Schizencephaly.

Intracranial Hemorrhage.

Intracranial Cysts.

Posterior Fossa Abnormalities.

Normal Fetal CNS.

https://obimages.net/wp-content/uploads/2014/07/Finalnormalcns.mp4

Above. Normal fetal CNS at 22 2/7ths weeks. Video courtesy of Dr. Mayank Chowdhury; Pallav Imaging Institute, Mayflower Women's Hospital, Ahmedabad,

India.

Key fetal anatomy includes the choroid plexus, the septum cavum pellucidi (SCP), lateral ventricles, and the corpus callosum. The pericallosal artery is a continuation of the anterior cerebral artery and it continues superiorly and posteriorly supplying the corpus callosum and the medial aspect of the cerebral hemisphere.

Anencephaly.

https://obimages.net/wp-content/uploads/2011/08/ancef.orbit2_.mp4

Above. Anencephaly. Note orbits and triangular shaped head. Profile: Absence of the cranial vault and brain; bulging eyes.

https://obimages.net/wp-content/uploads/2011/08/Anceprofile.mp4

Above. Anencephaly. Profile: Absence of the cranial vault and brain above orbits, bulging eyes, short neck.

Top of Page

Spina Bifida.

https://obimages.net/wp-content/uploads/2016/01/SBVlemonlast-1.mp4

Above. “Lemon sign” spinal defect. Note associated hydrocephalus.

https://obimages.net/wp-content/uploads/2016/01/SBVCS2.mp4

Above. Note effacement of the cerebellum.

https://obimages.net/wp-content/uploads/2016/01/SBVACM.mp4

Above. Other findings of Arnold Chiari Malformation, obliteration of posterior fossa.

https://obimages.net/wp-content/uploads/2016/01/SBVSD.mp4

Above. Coronal view of sacral defect.

https://obimages.net/wp-content/uploads/2016/01/SBVSDT.mp4

Above. Transverse view of sacral defect.

https://obimages.net/wp-content/uploads/2016/01/SBVMMCTRAN.mp4

Above. Lumbo-sacral myelomeningocele. Transverse view.

https://obimages.net/wp-content/uploads/2016/01/SBVLD.mp4

Above. Transverse view through the kidneys and lower lumbar area. Note disruption.

https://obimages.net/wp-content/uploads/2016/01/SBVLARG.mp4

Above. Longitudinal view. Large lumbo-sacral myelomenigocele.

https://obimages.net/wp-content/uploads/2012/08/CervMMlong.mp4

Above. Longitudinal view. Note defect in the cervical spine. Fetal head is on the right.

https://obimages.net/wp-content/uploads/2012/08/lonmm2.mp4

Above. Longitudinal to oblique view. Defect is at C5-C6 and the meninges can be visualized on this view.

https://obimages.net/wp-content/uploads/2012/08/tranv.ceervMM.mp4

Above. Transverse view of cervical spine with myelomenigocele.

Top of Page

Encephalocele.

https://obimages.net/wp-content/uploads/2016/01/ENCV1.mp4

Above. Large posterior encephalocele.

https://obimages.net/wp-content/uploads/2016/01/ENCV2.mp4

Above. Encephalocele. Note cranial defect and neural tissue outside the cranium.

https://obimages.net/wp-content/uploads/2016/01/ENCV3.mp4

Above. Encephalocele. Detail of neural tissue.

Top of Page

Holoprosencephaly.

Patient A: Gestational age 17 5/7 weeks, head circumference 6th percentile.

https://obimages.net/wp-content/uploads/2016/01/HPEmono.mp4

Above. Patient A. Monoventricle and congenital heart defect.

https://obimages.net/wp-content/uploads/2016/01/HPE2.mp4

Above. Patient A. Monoventricle. Diagnosis: Alobar holoprosencephaly due to Trisomy 13.

Top of Page

Septo-Optic Dysplasia.

https://obimages.net/wp-content/uploads/2016/01/NormalNoSOD.mp4

Above. Normal fetus. 24 4/7 weeks. Normal Twin B. Coronal view. The CSP (cavum septum pellucidum) is the mid-line anechoic rectangular structure. No evidence for anterior ventricular communication.

https://obimages.net/wp-content/uploads/2016/01/Nor.2.coronal.mp4

Above. Normal fetus. 24 4/7 weeks. Normal Twin B. Axial view. The CSP (cavum septum pellucidum) is the mid-line anechoic rectangular structure. No evidence for anterior ventricular communication.

https://obimages.net/wp-content/uploads/2016/01/ax.viewA_.mp4

Above. Abnormal fetus. Septo-optic Dysplasia (SOD). 24 4/7 weeks. Twin A. Axial view. Absent CSP. Anechoic anterior horns of lateral ventricles communicate. Top of ventricular communication is flat.

https://obimages.net/wp-content/uploads/2016/01/Sagsodb.mp4

Above. Abnormal fetus. Septo-optic Dysplasia (SOD). 29 6/7 weeks. Sagittal view. Absent CSP. Anechoic anterior horns of lateral ventricles communicate. Sagittal view shows extended lateral ventricles, not typical pattern for CSP.

https://obimages.net/wp-content/uploads/2016/01/Aposant.post29.6.mp4

Above. 29 6/7 weeks. Abnormal: possible SOD with hydrocephalus secondary to acqueductal stenosis. Absent CSP. Note communicating anterior horns of lateral ventricles. Some forms of hydrocephalus and hydrencephaly can result in anterior horn communication, but in those instances the CSP is usually present.

https://obimages.net/wp-content/uploads/2

016/01/Poss.SOD_.ant_.hornscomm.mp4

Above. 29 6/7 weeks. Abnormal: possible SOD with hydrocephalus secondary to acqueductal stenosis. Absent CSP. Posterior horns lateral ventricle separate and anterior horns communicate.

Top of Page

Ventriculomegaly.

https://obimages.net/wp-content/uploads/2012/08/fn.ventr_..mp4

Above. Ventriculomegaly. Note dilatation of the lateral and 3rd ventricles and movement of the mid-line faux.

Top of Page

Hydrocephalus.

https://obimages.net/wp-content/uploads/2016/01/1.ASV2_.mp4

Above. Aqueductal Stenosis. 32 weeks. Dilatation of the lateral ventricles. Thalamus compressed but normal. Disruption of the falx. Thinning of cerebral cortex.

https://obimages.net/wp-content/uploads/2016/01/HCVED2.mp4

Above. Aqueductal Stenosis. 36 weeks. Same patient. Increased dilatation of the lateral ventricles with increased head size. Further disruption of the falx, and thinning of cerebral cortex.

https://obimages.net/wp-content/uploads/2016/01/AS3.mp4

Above. Aqueductal Stenosis. Asymmetric dilatation of lateral ventricles. 3rd ventricle dilated (round anechoic area).

https://obimages.net/wp-content/uploads/2016/01/AS4.mp4

Above. Aqueductal Stenosis. Coronal view. “Monoventricle.” Thalami do not appear fused.

https://obimages.net/wp-content/uploads/2016/01/HV1.mp4

Above. Hydrocephalus due to hemorrhage (mixed echogenic mass).

https://obimages.net/wp-content/uploads/2016/01/HV2.mp4

Above. Same patient. Hydrocephalus due to hemorrhage. Clot is elongated (mixed echogenic mass).

Top of Page

Schizencephaly.

https://obimages.net/wp-content/uploads/2012/09/Schizen.Coronal1.mp4

Above. Schizencephaly. Coronal view.

https://obimages.net/wp-content/uploads/2012/09/Sag.schiz_.mp4

Above. Schizencephaly. Sagittal view.

Top of Page

Intracranial Hemorrhage.

https://obimages.net/wp-content/uploads/2016/01/FIRST-ANNO-HEMORR-HYDRO.mp4

Above. Hydrocephalus due to intracranial hemorrhage. Dilated posterior and anterior horns of lateral ventricles.

https://obimages.net/wp-content/uploads/2016/01/annotated-video2.mp4

Above. Same patient. Hydrocephalus due to intracranial hemorrhage.

Top of Page

Intracranial Cysts.

https://obimages.net/wp-content/uploads/2016/01/ARACH2.mp4

Above. Arachnoid cyst, middle cranial fossa, 31 6/7 weeks.

https://obimages.net/wp-content/uploads/2016/01/ARACH3.mp4

Above. Same patient. Arachnoid cyst, middle cranial fossa, 31 6/7 weeks. Anatomy, otherwise normal.

https://obimages.net/wp-content/uploads/2016/01/ARACH4.mp4

Above. Large arachnoid cyst. 4.5 cm greatest diameter, right inferior parietal area, 34 3/7 weeks.

https://obimages.net/wp-content/uploads/2016/01/ARACV2.mp4

Above. Same patient. Large arachnoid cyst. 4.5 cm greatest diameter, right inferior parietal area, 34 3/7 weeks. Anatomy, otherwise normal.

https://obimages.net/wp-content/uploads/2016/01/INCV4.mp4

Above. Intracranial cysts secondary to Oral Facial Digital Syndrome, 22 2/7 weeks.

https://obimages.net/wp-content/uploads/2016/01/INV5.mp4

Above. Same patient. Intracranial cysts secondary to Oral Facial Digital Syndrome, 22 2/7 weeks. ACC (absence of corpus callosum) also present.

https://obimages.net/wp-content/uploads/2016/01/SDHV1.mp4

Above. Massive subdural hematoma, 32 2/7 weeks with displacement of mid-line

structures.

https://obimages.net/wp-content/uploads/2016/01/SUBDURPC.mp4

Above. Same patient. Massive subdural hematoma, 32 2/7 weeks with porencephalic cyst.

Top of Page

Posterior Fossa Abnormalities.

https://obimages.net/wp-content/uploads/2016/01/CEBHYPO.mp4

Above. Cerebellar hypoplasia. Note small cerebellum.

Top of Page

Related posts:

Ebstein Anomaly: Imaging Considerations

Normal Fetal Heart Ultrasound

Video