The lesion was accompanied by significant hypoplasia of cerebellum (cerebellar transverse diameter under 2nd percentile) and enlarged cisterna magna. Both hemispheres were with regular contour aspect and homogeneous hypoechogenic content. Ultrasound evaluation revealed at 35 weeks the appearance of a significant Blake pouch cyst, mega cisterna magna (13 mm) and hydramnios (amniotic index 30 cm) which required amniocentesis for maintaining the amniotic index under 20 cm. Any other structural anomaly or vascular abnormality was not found either in second trimester or in 3rd trimester of gestation.

Caesarean section was performed at 38 weeks of gestation. Postnatal MRI was not performed yet, but the infant had unremarkable neurological development at 1 month of extrauterine life. Parents refused genetic studies.

EP07.15
Vertebral duplication with caudal regression syndrome: a case report

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Caudal duplication syndrome is a rare condition with only about 40 cases are reported in the literature. Female patients predominate in a ratio of about 2:1. Spinal and spinal cord duplicity shows a wide spectrum of anomalies, ranging from a simple fibrous band splitting the cord into halves to complete duplication of the spine and spinal cord. The more serious forms are rare and only a limited number of cases are on record. They are usually associated with other systemic malformations, including duplication of vascular structures, the distal gastrointestinal and urogenital tracts and possibly limb malformations. A neurologically intact pediatric female baby of 1 year was brought by her parents for MRI lumbar spine. Her parents gave history of fecal passage from her precious site of surgery in lumbar spine for lipomyelomeningocele, Combined MRI and CT scan of the dorsolumbar spine report showed complex vertebral malformations with complete duplication of vertebral column from LV1 level downward till SV1 showing possible duplication of the spinal cord with deformed and bifid posterior elements from DV9 level downwards. Coccygeal vertebra are absent suggestive of caudal regression syndrome. This is one of the rare case reports which show combined vertebral (spinal) duplication with caudal regression syndrome.

Supporting information can be found in the online version of this abstract

EP07.16
Fetal brain lateral ventricles width: does laterality matter?

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Objectives: To evaluate whether fetal brain lateral ventricle width differ between the right and the left side of the fetal brain and to explore whether asymmetry tends towards either side.

Methods: This was a prospective cohort study of fetuses evaluated in a single tertiary medical centre. Included were fetuses in which both lateral ventricles were measured < 10 mm and no anomalies were detected in the scan. Lateral ventricle measurements were performed in the axial plane at the level of the atria. We excluded cases in which measurement of both ventricles was not possible. Wilcoxon signed-rank test was used to detect differences between the ventricles' width. Linear regression model was used to assess the association between one ventricle width to the contralateral ventricle width, fetal head position, gender and gestational week.

Results: Of 45 normal scans, both ventricle measurements were available in 42 fetuses. Gestational age range was 20-35 weeks of gestation. No significant difference was found between posterior and anterior ventricle width (mean 6 ± 1.2mm vs. 5.8 ± 1mm, respectively, p = 0.11) and between right and left ventricle width (mean 5.8 ± 1mm vs. 6 ± 1.2mm, respectively, p = 0.63). Regression model demonstrated that the left ventricle width was strongly associated with the right ventricle width (Beta = 0.53, 95% CI 0.25-0.92, p = 0.001) but not with head position (Beta = -0.19, 95% CI -1.15 - 0.26, p = 0.548), fetal gender (Beta = 0.01, 95% CI -0.7- 0.74, p = 0.549) or gestational age (Beta = 0.09, 95% CI -0.05-0.1, p = 0.357).

Conclusions: In our study fetal ventricular width measurement did not differ between the left and right sides, nor was the lateral ventricle measurement affected by the head position. Ventricle width was strongly associated with the width of the contralateral ventricle, regardless of fetal head position, gender and gestational age.

EP07.17
A fetus with peripheral primitive neuroectodermal brain tumour

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Fetal intracranial tumour is very rare, 0.5~1.9% of all pediatric tumors, and 13% of all fetal and neonatal brain tumors. A 34-year-old multiparous woman was admitted at 28+5 weeks of gestation for preterm labour and short cervical length. Tocolytics and conservative management were applied. Antenatal Down syndrome screening, 50g glucose tolerance test, and target sonogram at 20 weeks of gestation were in normal ranges. At 31+4 weeks of gestation, mild hydrocephalus, 11mm lateral ventricle was showed. 2 weeks later, 33+5 weeks of gestation, hydrocephalus was enlarged to 17mm, and intracranial irregular shaped and rapid growing mass, 5.8 x 5.7cm at middle area of brain was measured. The next day, a male baby weighing 2,59kg was delivered through Caesarean section, because of breech presentation, enlarged head size. Apgar score was 1/5 min was 7/8. Head circumference was 35.5cm and 95th centile. Brain MRI was showed that 7.7cm supratentorial brain stem tumour, downward transtentorial brain herniation, and severe hydrocephalus. After birth 6th day, neurologic surgery was taken. The pathologic diagnosis was peripheral primitive neuroectodermal tumour. The baby was expired at 8th days after birth.

EP07.18
Frequency of the intrauterine diagnostic congenital Zika and Zika viruses detection in amniotic fluid: bi-directional cohort study

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Objectives: To evaluate the frequency of diagnosis of Congenital Zika Syndrome (CZS) during pregnancy and the prevalence of confirmed cases through RT-PCR for ZIKV in amniotic fluid.

Methods: A study with pregnant women with exanthema submitted to ultrasonography (prospective arm) and children with SZC (retrospective arm). Pregnant women with sonographic findings suggestive of SZC performed using Sansung WS80 Elite were submitted to amniocentesis for ZIKV research. Neurosonography

(prospective arm) and Computed Tomography were performed in the neonate (retrospective arm). Chi-square test was used to compare the presence of symptoms between the prospective and the retrospective arm and the Mann-Whitney test to compare the number of ultrasonographies when intrauterine diagnosis was performed or not.

Results: 102 pairs of mothers and fetuses/children with CZS were included (28.7% prospective and 71.3% retrospective). Intrauterine diagnosis was performed in 52.9% of the total sample and in 100% of the prospective arm. The median sonographic examination was 3 vs 4 (had no intrauterine diagnosis vs the had intrauterine diagnosis, $p < 0.001$). Amniocentesis was performed in 19 pregnant women, with RT-PCR positive in 11 (57.9%). Among the ultrasound findings, ventriculomegaly was the main finding (43.1%), followed by microcephaly (42.2%), subcortical calcifications and/or nuclei of the base (30.4%), posterior fossa alterations (22.5%), arthrogryposis (7.8%) and corpus callosum dysgenesis (5.9%).

Conclusions: Despite having a high frequency, microcephaly was not present in all CZS cases, and the diagnosis of the syndrome should take into account intracranial findings. The percentage of cases without intrauterine diagnosis was high.

Supporting information can be found in the online version of this abstract

EP07.19
First trimester diagnosis of open neural tube defect: case series at a primary referral centre

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Keeping in focus the inversion of the pyramid of antenatal care we evaluate the fetus thoroughly in the first trimester. We present a case series of open spina bifida diagnosed in the first trimester. Out of 720 patients referred for nuchal translucency (NT) scan between January 2018 to March 2019, three fetuses were diagnosed to have open spina bifida. The clue was abnormal posterior fossa. There was absence of intracranial translucency (IT) on the mid-sagittal view, in all three fetuses. The brain stem to brain stem occipital bone ratio was more than 1 in all cases. We retrospectively confirmed the decent of the midbrain to brainstem junction below the Maxillo-occipital line. Kyphosis and deficient skin covering were seen in two cases. Small subtle meningocele was seen in one case. Thus intracranial signs are extremely helpful in the first trimester diagnosis of open spina bifida.

Supporting information can be found in the online version of this abstract

EP07.20
Early detection and characterisation of CNS anomalies at 11–14 weeks in a mixed population attending a tertiary centre in a metropolitan city in India

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Objectives: To diagnose and characterise fetal CNS anomalies at 11-14 weeks of gestation to facilitate early management decisions.

Methods: This was a retrospective analysis of 2377 pregnancies from a mixed economic and cultural background who underwent an 11-14 week-scan at a centre that provides primary, secondary and tertiary imaging care in Mumbai (India) between 2017 and 2018. Crown–rump length was 45 to 84 mm. The age range was 18-46 years (median 27 years). All scans followed ISUOG guidelines.

Results: The prevalence of CNS anomalies was about 1.09%. Of a total of 26 anomalous fetuses, 12 had an acrania-exencephaly sequence, 6 open spina bifida, 3 encephaloceles, 2 holoprosencephalies, 1 closed NTD and 2 suspected posterior fossa anomalies. 3 patients were lost to follow up. One encephalocele had associated Iniencephaly. Another had a double outlet right ventricle at 16 weeks follow up. Acrania-exencephaly was easily identified because of gross anatomical distortion. All open spina bifidas were suspected by nonvisualisation of the intracranial translucency. Complete or partial non-visualisation of the falx led to the diagnosis of holoprosencephaly.

Conclusions: The overall prevalence of NTDs in India is high (0.05-1.1%) compared to other regions of the world, consequent to multiple factors possibly including lack of periconceptional folate supplementation, poor patient compliance, genetic predisposition and suboptimal ultrasound evaluation. These defects frequently give rise to quality of life issues. High end technology and operator skill enable early diagnosis. This potentially facilitates patient counseling and family decision making at a stage in pregnancy when termination, if opted for, is safer and psychologically simpler.

EP07.21
First trimester sonographic diagnosis of posterior fossa abnormalities: reference ranges and associated findings in fetuses with open spina bifida

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Objectives: To report reference ranges for posterior fossa measurements at 11-13 weeks' gestation and to describe the sonographic findings, karyotype results, and pregnancy outcome in fetuses presenting open spina bifida (OEB) in the first trimester of pregnancy.

Methods: Consecutive fetuses with normal posterior fossa in which the brainstem (BS), fourth ventricle, cisterna magna, and BS-occipital bone (BS-OB) distance were measured and the BS/BS-OB ratio was calculated. The study group consisted of eight fetuses in which a OEB was detected. Information on sonographic findings, prenatal karyotype results, and pregnancy outcome were obtained

EP07.20: Table 1. Various CNS anomalies found in our study

Cases	*Acrania - exencephaly*	*Open spina bifida*	*Encephalocele*	*Holoprosencephaly*	*Closed neural tube defect*	*Suspected posterior fossa anomalies*	
Number of cases	12(46.1%)	6(23.0%)	3(11.5%)	2(7.6%)	1(3.8%)	2(7.7%)	Total cases- 26