Racing car brings tear drops in the moose

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DESCRIPTION

The corpus callosum is a band of white matter connecting two cerebral hemispheres of the brain and responsible for the integration of motor, sensory and cognitive information. Its development starts in the first trimester of pregnancy, while maturation continues to childhood and adolescence. The true incidence and the precise aetiology of the anomalous development of corpus callosum are impossible to determine clinically without brain imaging.

Anomalies in the development of corpus callosum vary from partial, complete or atypical agenesis. They occur in isolation or in association with neuronal migration disorders, aneuploidy (trisomies 18 and 13), central nervous system (CNS) syndromes (Aicardi and Aperts syndrome), CNS associations (Arnold-Chiari and Dandy-Walker malformations) and certain inborn errors of metabolism of lactate and pyruvate.

The clinical spectrum of agenesis of corpus callosum varies from early mortality, seizures, poor developmental outcome, hypertelorism to mild learning disability.^{1 2}

Diagnosis can be made from antenatal ultrasound scans from the 20th week of gestation but multiplanar MRI, is the modality of choice, as it has better sensitivity to depict the associated anomalies, with its high soft tissue contrast (figure 1).

Figure 1 MRI in agenesis of corpus callosum.

The MRI of brain with agenesis of corpus callosum show (figure 2)

1. The racing car sign: the two lateral ventricles of the brain are seen as parallel bodies from the midline. This resembles a formula one car

Figure 2 Cartoon image depicting the resemblance to a racing car, tear drop and moose head.

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seen from above, with tyres represented by the widely spaced frontal horns.

2. Tear drop sign—colpocephaly: the enlarged atria and dilated occipital horn of the lateral ventricles give a tear drop appearance.
3. Moose head sign: in the coronal section the interhemispheric fissure is in continuity with a dilated and dorsally elevated third ventricle. The lateral ventricles are indented medially by the Probst bundles while the frontal horns are sharply angulated and so resemble the palmate antlers of a moose.

Learning points

- Spot diagnosis on MRI with the aid of mnemonic.
- Structural defect identification, for early diagnosis and to predict outcome.

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