Article published online: 2021-07-26

Mid-sagittal section of the fetal face: Still a showstopper

Sir,

We allude to the interesting article titled, 'Intracranial translucency as a sonographic marker for detecting open spina bifida at 11–13^{+6} weeks scan: Our experience by Teegala *et al*.[1] The authors have clearly illustrated the significance of the obliteration of intracranial translucency (IT) as a marker for open spinal dysraphism (OSD) in the first trimester. Evaluation of the mid-sagittal plane of the fetal face is an integral part of every first trimester scan between 11 and 13^{+6} weeks. As the time spent on each scan is an important consideration in clinical practice, evaluation of IT in the same mid-sagittal plane gives a rich dividend of early detection of an OSD at no extra cost of time. However, there are instances when IT is difficult to assess, as is the case in this study as well.

In a recent study, Ramkrishna *et al*. proposed a novel marker for detection of OSD in the first trimester, namely the maxillo-occipital line in the mid-sagittal plane.[2] The maxillo-occipital line is a straight line drawn along the superior border of the maxilla that touches the occipital bone posteriorly. The authors observed that the junction of the thalamus with the midbrain was above this maxillo-occipital line in normal fetuses and below this line in the fetuses with open spina bifida. This can be attributed to the descent of the brainstem in open spina bifida due to the egress of the cerebrospinal fluid through the spinal defect. The observation is illustrated in a normal fetus [Figure 1] and a fetus with lumbosacral myeloschisis [Figure 2]. These findings are also evident in the cases shown in the article by Teegala ML *et al*. Assessment of the case in this study in which the IT was not clear using the maxillo-occipital line may be enlightening.

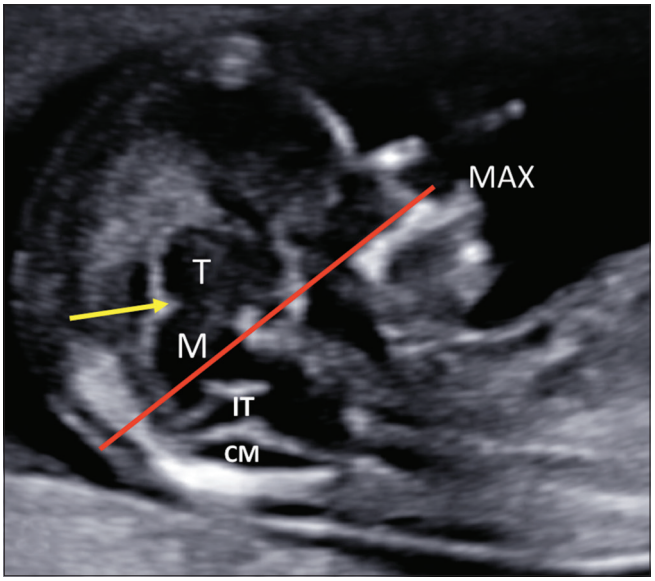

Figure 1: Mid-sagittal section of the face in a normal fetus at 12^{+4} weeks. The maxillo-occipital line (red line) is drawn along the superior border of the maxilla (MAX) touching the occipital bone posteriorly. The junction (arrow) of the thalamus (T) with the midbrain (M) is above this line. Intracranial translucency (IT); Cisterna magna (CM)

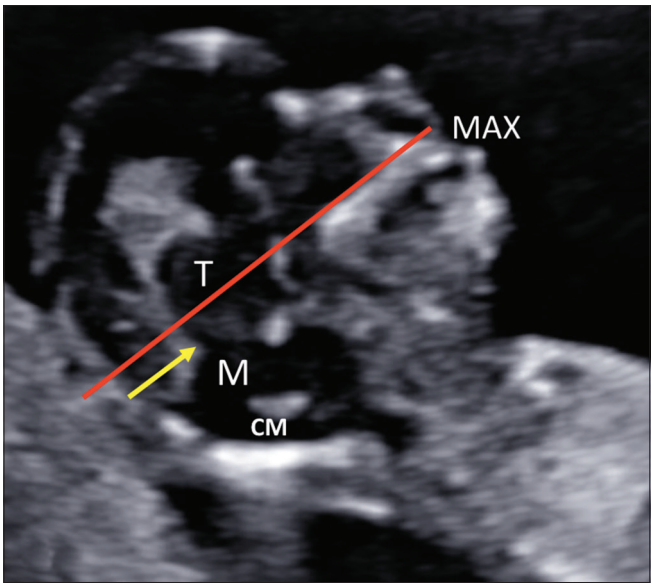

Figure 2: Mid-sagittal section of the face in a fetus with open spina bifida at 12^{+3} weeks. The maxilla-occipital line (red line) is drawn along the superior border of the maxilla (MAX). The junction (arrow) of the thalamus (T) with the midbrain (M) is below this line. The intracranial translucency is obliterated. Cisterna magna (CM)

In conclusion, obliteration of IT (fourth ventricle) is a strong marker for OSD in the first trimester. The novel marker, namely the maxillo-occipital line, which is a pointer of brainstem descent in OSD may aid in enhancing the operator's degree of confidence in case IT is not clear. Although the mid-sagittal section of the fetal face made its debut on the runway more than two decades ago to measure nuchal translucency, it continues to be a showstopper revealing new sonographic markers of fetal anomalies.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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Access this article online	
Quick Response Code:	Website: www.ijri.org
	DOI: 10.4103/ijri.IJRI_47_18

Cite this article as: Singh D, Kaur L. Mid-sagittal section of the fetal face: Still a showstopper. Indian J Radiol Imaging 2018;28:376-7.