Maxillary gap sign at 11-13 weeks – intra- and interobserver reliability in isolated cases of cleft lip and palate

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Objective
To evaluate the reliability of the maxillary gap sign for detection of cleft lip and palate (CLP) using the midsagittal view for measurement of nuchal translucency at 11-13 weeks of gestation in fetuses with isolated CLP regarding the criteria of the Fetal Medicine Foundation.

Methods
This was a retrospective study of stored images of the mid-sagittal view of the fetal face and brain at 11–13 weeks’ gestation of 5 cases of CLP and in 100 normal controls. The affected and unaffected cases were confirmed at 20-22 weeks. Two examiners blinded by the pregnancy outcome assessed independently the stored images twice. If identified the maxillary gap was measured.

Results
In all affected cases of CLP both sonographer identified the pictures independent correctly. There was no false-positive case. The gap diameter, if measurable was >1.5 mm in all cases and in none of the normal controls.

Conclusion
The maxillary gap as described by Chaoui R et al. is a reliable marker for CLP with a low False Positive Rate and could increase the detection rate of CLP at 11-13 weeks.