

Establishment of a nomogram for ultrasound assessment of fetal thoracic length

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Standardized echographic evaluation of skeletal dysplasias needs well defined and documented nomograms based on reproducible plans that are useful for prenatal diagnosis. Within this universe the evaluation of fetal thorax dimensions is one of the areas in need of development. In the current literature consulted, normal dimensions are only described in a transverse plane, through thoracic-abdominal or thoracic-cranial ratios. To our knowledge, there is no standardized evaluation that allows us to objectify the suspicion of a small fetal thorax by measuring its length in the longitudinal plane.

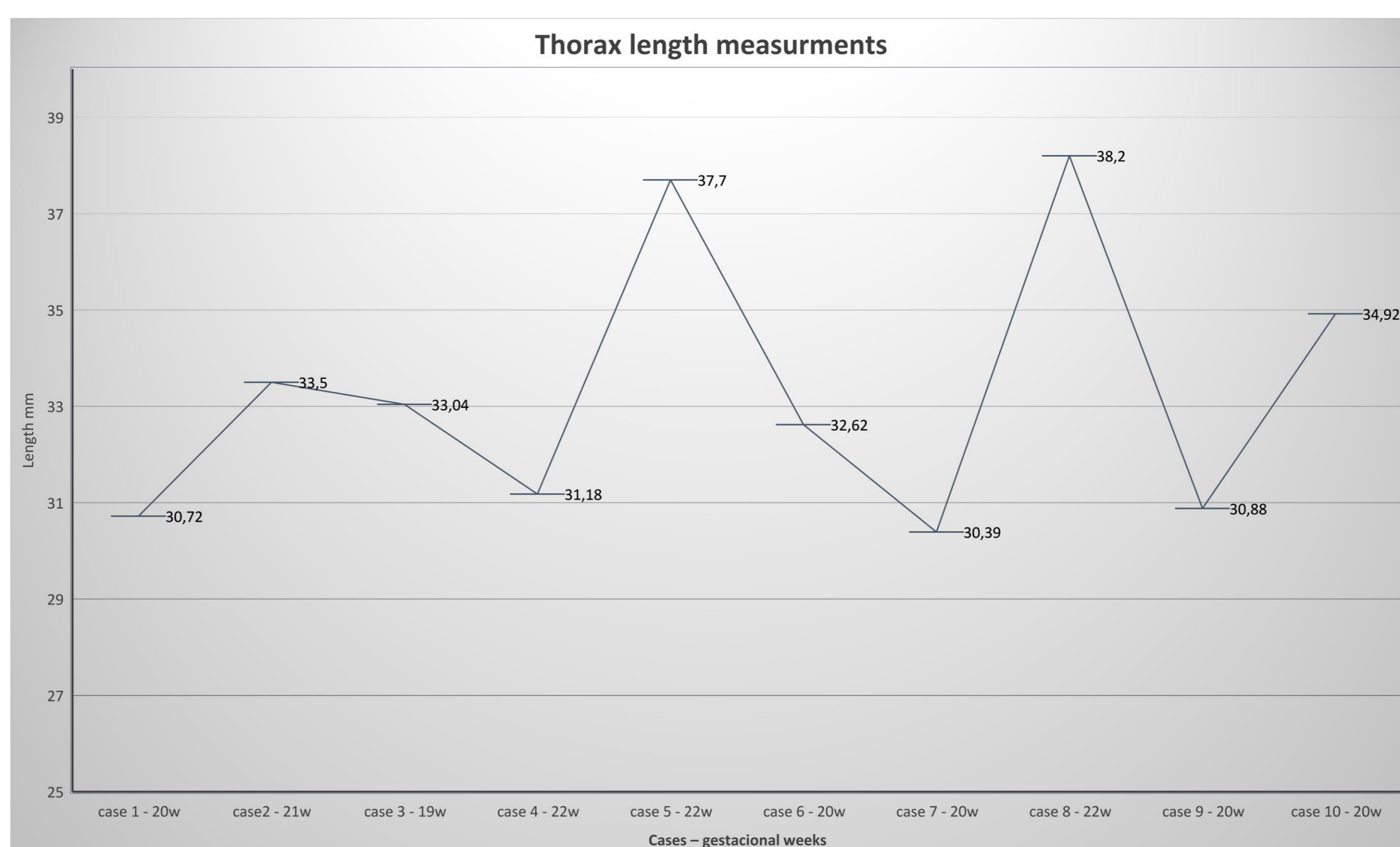
Objectives: Describe an ultrasound plan for creating a nomogram of the longitudinal length of the fetal thorax.

Methodology: Description of the thoracic evaluation plan and testing of its feasibility, in a sample of 10 cases, under ultrasound evaluation between 19 and 22 weeks of gestation.

Plan description: longitudinal fetus, mid-sagittal view, with posterior dorsum, visible neck and at least 2/3 of the abdomen, cardiac area identified and visible aortic outlet/cross.



Results: With the work presented, we were able to define a reproducible ultrasound plan in 10 cases, evaluated between 19 and 22 weeks of gestation.



Graph 1 - Distribution of chest longitudinal length measurements by cases defined by weeks of gestation.

Conclusions: The definition of a reproducible echographic plane, which allows the longitudinal evaluation of fetal thorax length, is the first step towards the development of a nomogram of this measurement. We propose further development of this research, until the nomogram is created. This could become extremely useful in the prenatal diagnosis of skeletal dysplasias.