

New markers calculation of risk during screening ultrasound I trimester of pregnancy

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Objective

To develop standards for FMS in 11-14 weeks of pregnancy.

Methods

In our study, we measured the front-mandibular size in fetuses to develop nomograms in 11-14 weeks of pregnancy. Measurement of fronto-mandibular size was carried out in 1428 cases of singleton pregnancies of 11-14 weeks. Studies have been made in "Screening Mother and Child" Republican center for the period 2014-2015. From studies were excluded cases in which the fetuses were diagnosed HA, birth defects, as well as with significant oligohydramnios, which could make it difficult to study. The final group consisted of 1120 healthy fruit. Age of patients ranged from 18 to 44 years, averaging 30 years old. The measurements were carried out on the apparatus PHILIPS HD 11 XE. Methods of assessment: Gestational age 11 weeks 0 days - 13 weeks 6 days; coccyx-parietal size 41-78mm; Location of the fetus - strictly horizontal; Sagittal cross-section of fruit; The neutral position of the embryo / fetus; Increase in the zone of interest, head and upper third of the chest; Upon receipt of the correct section is visualized tip of the nose, the upper jaw and the lower jaw, the thalamus, midbrain, bridge, medulla, frontal bone, nuchal and occipital bone; Location on the calipers (Fig. 1, Fig. 2).

Results

The analysis of 1120 fetuses with ultrasound measurement of fronto-mandibular size in 11-14 weeks of pregnancy. In all these observations, information about normal karyotype or the birth of healthy children were obtained. In the course of our research was found a gradual increase is directly proportional to the length of the fronto-mandibular size with increasing gestational age by the linear dependence (Table. 1) In assessing the relationship biparietal diameter of the head to the front-mandibular size, it was found that it does not change with increasing gestational age, averaging 2.3 in 11-14 weeks.

Conclusion

Evaluation of fronto-mandibular size (FMS) is a fairly simple method for screening ultrasound at 11-14 weeks of pregnancy. The results of this study allowed us to develop a nomogram FMS, which can be used for early diagnosis of fetuses congenital and hereditary diseases.