AIM: Among the heterogeneous group of acrofacial dysostoses, combining varying severities of malformations of the craniofacial region and limbs, Nager syndrome is a rare condition, but the most common form of acrofacial dysostosis. We herein report on the abnormal combined test results and the prenatal sonographic findings of Nager Syndrome.

METHODS: 23 year old primigravid patient with consanguinous marriage (first cousin with her husband) evaluated for I trimester vaginal bleeding. Her hematological and biochemical tests were normal. Ultrasound evaluation at 11 weeks of gestation revealed nuchal thickness of 3.0 mm. Biochemical screening results were: PAPP-A of 1.32 mIU/ml (0.59 MOM) and a free β hCG of 15.1 ng/ml (0.30 MOM), with a risk of 1/720 in combined test and <1/10000 in double test and an increased risk for trisomy 13/18+NT (1/356) compared her age, but still under the cut off. Chorion villus sampling was performed. Fetal karyotype analysis revealed 46 XX karyotype. Ultrasound evaluation at 13 weeks revealed biparietal diameter and head circumference below 5th percentile, severe micrognathia and malar hypoplasia (Figure 1a) and the club hand deformity together with bilateral radial aplasia and thumb aplasia/hypoplasia and limited extension of the elbows (Figures 1b).

RESULTS: Due to the presence of multiple malformations and the preliminary findings of microcephaly, pregnancy was terminated at 15 weeks. Prenatal sonographic findings were confirmed after abortion (Figures 1c-d-e). Downslanted palpebral fissures, anormal localization of the ears, macrostomia, hypoplastic ribs, absence of first cervical vertebra, pelvic deformity and right leg deformity were also noted at postmortem examination and X-rays (Figures 1c-d-e). Mutation analysis of coding exons identified Splicing Factor 3 (SF3B4) gene mutation on chromosome 1q12-q21 in the male infant.

CONCLUSION: In non of the patients with Nager Syndrome, karyotype anomaly has been reported; however; SF3B4 gene mutation on chromosome 1q12-q21 have been associated with the syndrome. Up to now, less than 100 cases of Nager Syndrome have been reported and this is the first paper presenting the sonographic findings of the Nager Syndrome with ;SF3B4 gene mutation on chromosome 1q12-q21 in the I trimester.

REFERENCES