4753: Extending the measurement of Nuchal Translucency (NT) upto 14+6 weeks- can this predict the possibility of chromosomal and structural abnormalities in this 'Late NT' group?

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Introduction: Multiple studies over the years have shown an association of increased NT with chromosomal abnormalities in fetuses. However there haven't been many large population based studies which give us nomograms for NT after 13 weeks 6 days.

Objectives:

To analyse the incidence of chromosomal abnormalities (detected antenatally or postnatally) in structurally normal fetuses along with the incidence of structural defects in fetuses with NT greater than 95th centile between 14 - 14+6 weeks using a nomogram

Methodology:

- Nomogram for NT for CRL > 84 mm between 14 - 14+6 weeks was created from 405 structurally & chromosomally normal fetuses with complete follow-up
- 5th, 50th & 95th centiles for NT between this gestational age was 1.6mm, 2.2mm & 2.9 mm respectively
- Retrospective data from 2015-2022 from a single tertiary fetal medicine unit in South India
- All scans were performed by FMF operators as per FMF criteria & database was maintained on Astraia software (Fig 1)
- Incidence of chromosomal and structural abnormalities was calculated in fetuses with NT < & > 95th centile to assess the predictive power
- Outcome of pregnancies was obtained by telephonic interview of parents and examination of hospital records
- **Inclusion criteria:** Singletons between 14-14+6 weeks (CRL>84mm) with available NT values & postnatal follow up
- **Exclusion criteria:** Fetuses with associated structural anomalies, CRL < 84mm & multiple pregnancies

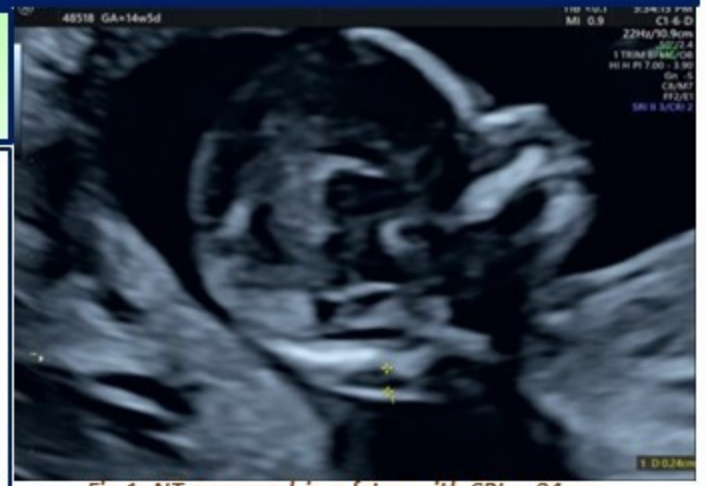

Fig 1: NT measured in a fetus with CRL > 84mm

Results

- Total -489 fetuses
- Divided into 2 groups- 'A' & 'B' based on NT < or >95th centile respectively. 44/489 (8.9%) fetuses had NT > 95th centile
- 8/402 (2%) fetuses (without structural defects) in group A had chromosomal abnormalities
- 1 fetus (without structural defects) in group B having an NT measuring 3.1 mm was found to be positive for T21
- 5/23 (21.7%) fetuses in group A & none in group B respectively had cardiac defects
- None of the fetuses with structural defects in group A had any chromosomal abnormality. 1/2 (50%) fetus in group B who had hydrops, was diagnosed with T21

NFT \ KT	KT/CMA- Normal	KT/CMA- abnormal
<95th centile (402) (Group A)	394/402 (98%)	8/402 (2%) {T21- 1 (had absent nasal bone) Thal major- 3 Mosaic 45(15)/47(15)- 1 Other genetic problems- 3}
>95th centile (30) (Group B)	29/30 (96.7%)	1/30 (3.3%) {T21- 1 NT was 3.1 mm}

Conclusions:

- It is common in our country for women to attend for the "first trimester scan" after completion of 13 weeks 6 days
- Although detailed assessment of the fetal anatomy is possible at this stage, we are unable to assess the risk for chromosomal abnormalities as many times the CRL is >84 mm
- By creating a nomogram for measurement of NT at 14 – 14+6 weeks & showing a positive correlation of increasing NT with chromosomal & structural abnormalities, we suggest that this information is replicated in other units, recruiting larger numbers at this gestational age
- Validating the nomograms and using them might help those women who "miss" the first trimester scan at 11+0 to 13+6 weeks of pregnancy

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