Correlation between increased nuchal translucency and chromosomal abnormalities (ID: 245)

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**Objectives**
To estimate the risk of chromosomal abnormalities and explore the application of CMA in fetuses with increased nuchal translucency (NT).

**Methods**
A total of 374 fetuses diagnosed as increased NT from the third affiliated hospital of Guangzhou Medical University were studied retrospectively to analyze the ultrasound and CMA results.

**Results**
Of 374 fetuses with increased NT, 109 (29.1%) cases had abnormal CMA findings. All cases were divided into four groups according to the NT measurement. In group NT between 2.5-3.4 mm, 3.5-4.4 mm, 4.5-5.4 mm and NT≥5.5 mm, the number of cases and the number of chromosomal abnormalities cases were 114, 26 (22.8%); 150, 33 (22.0%); 55, 19 (34.5%); 55, 31 (56.4%), respectively. There was significant difference in chromosomal abnormalities among NT groups, and the degree of fetal NT thickness was positively correlated with chromosomal abnormalities (r=0.208, P<0.05). There were 64 cases with other ultrasound abnormalities and 39 cases of these presented chromosomal abnormalities (60.9%). Compared the fetal chromosomal abnormalities between the cases with other ultrasound abnormalities and the cases of isolate increased nuchal translucency, the difference was significant (χ²=37.794, P<0.001).

**Conclusion**
Fetuses with increased NT have a greater incidence of chromosomal abnormalities, structural malformations, and adverse pregnancy outcomes. The prevalence of chromosomal defects and adverse pregnancy outcomes increases exponentially with NT thickness. The abnormal chromosomal detection rate of fetuses with other ultrasound abnormalities was higher than that with isolate increased nuchal translucency.

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