

Noninvasive early detection of fetal gender from maternal blood by Taqman Real-time PCR method

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Background and Aim: In order to operate a noninvasive prenatal diagnosis of fetal gender, Y chromosome specific sequences in maternal plasma has been assessed by Taqman Real-time PCR method to establish early detection of fetal gender that can be used in clinics.

Methods and Materials: peripheral blood samples were taken from 30 pregnant women from 8 weeks of pregnancy. Fetal DNA template was extracted from maternal plasma by QIAamp DNA Blood Mini kit. Two specific probes along with their primers were used for amplification of SRY gene and DYS14 marker located on fetal Y chromosome.

Results: Amplification of DYS14 sequence and SRY sequence were observed in 14 cases from 30 samples except one sample for SRY gene. These results of fetal gender were compared with ultrasound sex detection after 4 months of gestation where the results were 100% similar among 30 cases.

Conclusions: These data showed that Taqman Real-time PCR method is a reliable and rapid method for noninvasive early detection of fetal gender. This method can be used for detection of other chromosome aneuploidies.

Biography

Fariba Rouhimoghaddam was born in 1974 in Iran. She received her bachelor's degree in chemistry from Iran's Shahid Beheshti University at the age of 26. Presently, she is a MA student of biochemistry in Payame Noor University of Iran and has passed her MA thesis in Iran's National Institute of genetic engineering.

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