عنوان مقاله:

?Can we rely on the multiplex ligation-dependent probe amplification method (MLPA) for prenatal diagnosis

محل انتشار:

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خلاصه مقاله:

Background: The major aneuploidies that are diagnosed prenatally involve the autosomal chromosomes 13, 18, and 21, as well as sex chromosomes, X and Y. Because multiplex ligation-dependent probe amplification (MLPA) is rapid and non-invasive, it has replaced traditional culture methods for the screening and diagnosis of common aneuploidies in some countries. Objective: To evaluate the sensitivity and specificity of MLPA in a cross-sectional descriptive study for the detection of chromosomal aneuploidies in comparison to other methods. Materials and Methods: Genomic DNA was extracted from the peripheral blood samples of 10 normal controls and the amniotic fluid of 55 patients. Aneuploidies screening of chromosomes 13, 18, 21, X and Y were carried out using specific MLPA probe mixes (P095-A2). For comparison purposes, samples were also tested by Quantitative Fluorescent-PCR (QF-PCR) and routine chromosomal culture method. Results: Using this specific MLPA technique and data-analyzing software (Genemarker v1.85), one case was diagnosed with 45, X (e.g. Monosomy X or Turner's Syndrome), and the remaining 54 cases revealed normal karyotypes. These results were concordant with routine chromosomal culture and QF-PCR findings. Conclusion: The experiment demonstrates that MLPA can provide a rapid and accurate clinical .method for prenatal identification of common chromosomal aneuploidies with 100% sensitivity and 100% specificity

کلمات کلیدی:

MLPA, Prenatal screening, Common aneuploidies