9th Yazd International Congress and Student Award on Reproductive Medicine with 4th Congress of Reproductive Genetics

Key Lectures

K-70
Chromosomal microarray methods for detection of aneuploidy and structural chromosomal abnormality in Paroxysmal nocturnal dyspnea

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Since the identification of the exact number of human chromosomes in 1956, different techniques have been developed to identify the number of chromosomes and structural chromosomal abnormalities. Some of them such as karyotyping and fluorescence in situ hybridization (FISH) are valuable tools in both research and diagnosis. Resolution limitation is one of the important limitations of these techniques. The inability to study the entire genome simultaneously was the next limiting factor. Fortunately, the advent of new technologies to help identify postnatal and prenatal chromosomal abnormalities has had a positive effect on reducing abnormal birth rates and increasing success in assisted reproductive techniques. In 1997, microarray-based comparative genomic hybridization (array CGH) was introduced. Array CGH has the high resolution of FISH and the ability to study all chromosomes simultaneously. This technique has led to great advances in medical genetics.