A cytogenetic Study of Down's Syndrome in Iraqi Population

Saad Abdulbaqi Alomar

Department of Pathology and Forensic, College of Medicine, University of Basrah, Basra, Iraq

Corresponding author E-mail: saad.abdullah@uobasrah.edu.iq

Doi:10.29072/basjs.20230307

ARTICLE INFO

Keywords

Down's Syndrome, Trisomy 21, Iraqi population, Chromosomal aberrations

ABSTRACT

Down's syndrome is the most common type of chromosomal abnormality found in neonates. It is associated with characteristic abnormal facial features and mental retardation. However, clinical diagnosis is not sufficient to confirm the disease. Classical karyotyping has long been used as a diagnostic tool for confirming Down's syndrome. The present study was conducted to confirm the cytogenetic composition of individuals suspected with Down's syndrome after the preliminary clinical a diagnosis in Basra, Iraq. Karyotype analysis was carried out for 249 suspected cases of Down's syndrome. 249 patients were confirmed to have Down's syndrome after cytogenetic tests. Nearly 90% of these patients had pure trisomy 21 and about 5% of cases had translocations. Less than 4% of cases were reported having mosaic trisomy and only 1.4% patients carried additional chromosomal abnormalities. In our study, the disease showed significant gender bias, with an excess of males over females (sex ratio was 1.39). The identification of specific chromosomal abnormalities in different variants of Down's syndrome patients work as first step towards improving their quality of life. The study also provides the basic information required to forecast the various complications associated with Down's syndrome.

Received 27 Apr 2023; Received in revised form 21 Aug 2023; Accepted 02 Dec 2023, Published 31 Dec 2023