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## **Cytogenetic Investigations in Mentally Challenged Individuals**

**Surbhi Mahajan, Anupam Kaur and Jai Rup Singh**

*Centre for Genetic Disorders, Guru Nanak Dev University, Amritsar 143 005, Punjab, India*

**KEYWORDS** Chromosomal Anomalies. Fragile Sites. Mental Retardation. Microcephaly

**ABSTRACT** Mental retardation means persistently slow learning of basic motor and language skills during childhood and a below-normal global intellectual capacity as an adult. Its incidence is reported to be 2-3% worldwide. Chromosomal aberrations account for 15% of mentally retarded individuals. In the present report, 183 mentally challenged individuals were cytogenetically analyzed. Peripheral lymphocytes were cultured using standard methods with modifications and metaphases were analyzed using automated karyotyping programme. The chromosomal aberrations were seen in 32 cases (17.4%) of which 22 (12.0%) were males and 10 (5.4%) females, most of these were in microcephalic individuals. Some of the chromosomal aberrations were: Yqh+, deletion Xq28, ring chromosomes, marker chromosomes, translocations, fragile sites etc. Thus cytogenetic investigations are important to screen cases with mental disability before proceeding to molecular/Fluorescence in situ hybridization analyses in these cases.