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Satellite Associations in Down Syndrome

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ABSTRACT The association of acrocentric chromosomes by their satellites, referred as satellite associations (SAs), is implicated as a cause for non-disjunction and hence an etiological factor for Down syndrome. The present study compares the frequency of SAs observed in 30 children with Down syndrome and their parents to that seen in 16 healthy children and their parents. Silver (Ag-NOR) stained metaphases showed statistically significant increase in SAs in children with DS, compared to controls. Satellite associations were found to be also significantly increased in either parent with DS offspring. Two patients with Robertsonian translocation showed decreased SAs. This study supports the hypothesis that an increased tendency for satellite associations is an indicator for non-disjunction.