

Minor Physical Anomalies and Chromosomal Fragility as Potential Markers in Schizophrenia. Preliminary Report

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ABSTRACT In the present study, the authors investigated chromosomal fragility in patients with schizophrenia, and compared the patients, who were positive for minor physical anomalies (MPAs) with those who were negative for MPAs in respect to chromosome fragility. 44 patients with schizophrenia were examined and compared to 23 matched healthy controls. A modified Waldrop-scale was used for evaluation of MPAs. The patient sample was divided: 22 patients with MPAs (MPA-positive) and 22 patients without MPAs (MPA-negative). Lymphocyte cultures of the patients and normal controls were divided into parallel cultures, with one set being treated with Methotrexate (MTX) and the other set remaining untreated. From both treated and untreated cells, 100 mitoses were analysed for structural anomalies. A highly significant difference in fragile sites was found between the MPA-positive and control group in both the treated and untreated cells. The MPA-negative cells were also different from those of the control group but only in the untreated condition. The MPA-positive and MPA-negative groups of the patients differed from each other in the MTX-treated cells. The MPAs and chromosomal fragility show a positive association, such that the prevalence of MPAs correlates with a higher percentage of chromosomal fragility. Both minor physical anomalies and chromosomal fragility are related to chromosomal instability. A significant association between them supports a genetic determination of MPAs.