DERMATOGLYPHICS AND SCHIZOPHRENIA: RECENT STUDIES IN SAMPLES FROM BRITAIN AND SPAIN

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Minor physical anomalies comprise a range of subtle alterations in the prenatal development of various anatomical structures, including dermatoglyphics. Dermal ridge differentiation takes place early in development, before the fifth month of intrauterine life. The resulting ridge configurations (shape and size, the latter represented by ridge-count) have a genetic background, but are also influenced by prenatal environmental factors and can therefore be used as indirect markers of disturbance during this critical period.

Finger ridge counts and palmar a-b ridge counts were studied in 139 chronic schizophrenics (DSM III) and 72 healthy controls from Barcelona. Both the total finger ridge count and the a-b ridge count were significantly lower in patients compared with controls, especially in those patients with no previous family history of schizophrenia. In a further study carried out at the Institute of Psychiatry (London) involving 38 schizophrenic patients (DSMIIIR) and 66 healthy controls, a significantly lower a-b ridge count was also found in the patient sample.

In another study conducted on a sample of British MZ twins, an excess of dermatoglyphic anomalies such as ridge dissociation was found in schizophrenic subjects. An increase in fluctuating asymmetry (an indirect marker of poor control in the development process) was also found in affected individuals in Spanish samples.

Our results reaffirm the greater frequency in these patients of dermatoglyphic alterations originating at the same key period as the CNS. This is in accordance with the hypothesis of a developmental alteration as a basis of this disorder. However, further studies are still necessary to determine the complex interaction between genetic and environmental factors involved in the genesis of both dermatoglyphic alterations and schizophrenia in some affected individuals.

OBSTETRIC COMPLICATIONS AND SCHIZOPHRENIA: A SCOTTISH CASE CONTROL STUDY BASED ON STANDARDISED OBSTETRIC RECORDS

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Background: There have been many reports of a higher incidence of 'obstetric complications' in the histories of schizophrenics than of controls, but because of the methodological shortcomings of most of these comparisons the relationship remains controversial.

Method: Comprehensive records, held on magnetic tape, covering all psychiatric hospital admissions and all hospital deliveries in Scotland since 1971 made it possible to identify the obstetric records of people born in 1971–74 who were subsequently admitted to hospital with a diagnosis of schizophrenia, and then to compare their standardised obstetric records with those of closely matched controls.

Results: 115 schizophrenic/control pairs were compared. The former showed a highly significant ($p < 0.001$) excess of complications of both pregnancy and delivery. In particular, there was a significant excess of pre-eclampsia (10 v 2) and of infants detained in hospital for neonatal care (18 v 6).

Conclusion: The raised incidence of obstetric complications often reported in schizophrenics is genuine and probably contributes to the aetiology of the condition.

MINOR PHYSICAL ANOMALIES IN SCHIZOPHRENIA: INTRODUCTION TO A NEW METRIC SCALE AND RESULTS IN SAMPLES FROM IRELAND

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Schizophrenia may be a disorder of neurodevelopment. Minor physical anomalies have been used as markers of prenatal maldevelopment and may provided clues in the search for the aetiologies of syndromes or diseases. There have been reports of an excess of dysmorphic features among patients with schizophrenia using a scale (Waldrop) that has been the focus of much criticism. We developed a comprehensive anthropometric scale to evaluate minor physical anomalies in schizophrenia. A set of craniofacial and bodily measures was compiled and 174 patients with schizophrenia and 80 control subjects matched for age and gender were examined. Patients displayed multiple anomalies of the craniofacial region, with an overall narrowing and elongation of the mid- and lower face and twelve anomalies: palatal height, palatal ridges, supraorbital ridges, bifid tongue, epicanthus, mouth width, ear protrusion, anterior ear helix shape, eye fissure inclination, biocular diameter, skull base width and ear lobe size distinguished patients from controls. This new scale, while procedurally more exacting than the Waldrop, enhances the definition of abnormalities previously suspected in individuals with schizophrenia. It describes abnormalities in the mid- and lower facial region among patients with schizophrenia which accurately distinguishes them from controls. The relationship between minor physical anomalies and other indices of prenatal disturbance, dermatoglyphics and fluctuating asymmetry may be useful in the search for the genetic and/or environmental origins of the disease.

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INTERNATIONAL COLLABORATIVE STUDY OF THE ASSOCIATION BETWEEN SCHIZOPHRENIA AND OBSTETRIC COMPLICATIONS. RELATIONSHIPS BETWEEN OBSTETRIC COMPLICATIONS, AGE AT ONSET, GENDER, AND FAMILY HISTORY

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Although most studies have found an excess of obstetric complications (OCs) among schizophrenic patients, there are discrepancies in the literature on the relationships between a history of OCs and characteristics such as gender, age at onset, or family history of schizophrenia. The sample size was a limiting factor in most previous studies for assessing such relationships. The aim of the present study was to examine in a large sample pooling data from different studies the links between a history of OCs and i) gender ii) age at onset iii family history of schizophrenia.

Published and unpublished raw data on individual OCs were obtained from 11 different European research groups. Individual data on definite and/or equivocal OCs rated according to the Lewis & Murray's scale were available for 882 schizophrenic patients. Diagnoses of schizophrenia were made in all studies according to international diagnostic criteria (RDC, DSM-III or III-R, or ICD-9). Individual data were also provided, where available, on birth order, age at onset, and family history of schizophrenia broadly and/or narrowly defined. For each study the source of information for obstetric history (maternal recall or obstetrical records) and the procedure for assessing family history were defined. Results of the meta-analysis on individual patient data will be presented.