
Immunochemical Profiles in Schizophrenia

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Abstract

The levels of immunoglobulins, IgA, IgG and IgM were assayed in schizophrenic patients. An analysis was also made of the immunoglobulin levels in these patients with respect to presence or absence of the paranoid features; positive or negative family history; acute or chronic nature; duration of the illness; pre and post-drug levels. Suitable age-sex matched control subjects were also examined for immunochemical profiles. The statistical evaluation did not reveal any characteristic alterations in any of the immunoglobulins in patients as compared to controls.

Key words -

**Immunoglobulins IgA IgM IgG,
Paranoid schizophrenia**

The fact that genetic factors play an important role in the etiology of schizophrenia has made several workers to search for a suitable laboratory parameter which would help in arriving at objective and reliable diagnosis, plan rational therapy and also help in prognostic formulations. One such parameter studied is the immunoglobulin levels. Solomon et al [1] were the first to make investigations in this area of immunoglobulins in schizophrenics. They reported that the levels of IgA and IgM were significantly elevated in long stay male patients. Strahlevitz and Davis [2] made studies on freshly admitted cases and reported increased levels of IgA. Bock et al [3] reported significantly decreased levels of IgA in schizophrenics but this was not statistically significant.

Delvacchio et al [4] reported that schizophrenics who had a positive family history had some what higher levels of IgG than those with negative history. Domino et al [5] reported higher levels of immunoglobulins in acute schizophrenics as compared to chronics. Delisi et al [6] concluded from their studies that drug free patients should be used for studies on immunoglobulins in schizophrenia to come to meaningful conclusions.

The present paper reports observations made during a study conducted to find out the immunoglobulin levels in schizophrenic patients seen at NIMHANS.

Material and Methods

The clinical material for this study was obtained from among the patients coming for consultation at this center. Schizophrenic patients who fulfilled the Research Diagnostic Criteria [7] were selected for this study. All of them were males and were in the age group of 17 to 45 years. A suitably age-sex matched group of healthy normals were chosen as control subjects.

In both the patients and controls, blood samples were obtained at 8 a.m. when the subjects were in fasting state. The serum samples were separated and processed for the determination of the immunoglobulin levels. For the quantitative estimation of IgA, IgG and IgM the fixed time procedure of Neumann [8] was used. The reagents used in this study were obtained from M/s Boehringer, Mannheim, WG.

Observations and Discussion

For this study 54 schizophrenic patients were available in whom longitudinal studies were carried out at different phases of the illness. There were 31 paranoids and the rest had no paranoid features. For purposes of control 30 healthy subjects were selected.

The immunoglobulin levels noted in schizophrenics and controls are indicated in Table 1.

Table 1 - Mean and range of immunoglobulins (mg/100 ml) in patients and controls

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From the data indicated in Table 1 it could be noted that there are no significant variations in the levels of different immunoglobulins between patients and controls. This is similar to the reports of Domino et al [5] and Sugerman et al [9]. There were also no differences noted with respect to the levels measured in schizophrenics before and after neuroleptic therapy; duration of the illness; presence of positive family history and presence of paranoid features. It is interesting to note that Pulkkinen [10] noted decreased IgM in paranoids, a finding not noted in the present study.

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