A STUDY OF SOME SOMATIC TRAITS IN SCHIZOPHRENIA

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SUMMARY

Some genetically determined traits, such as ear lobes, finger hair and hairy ear were studied in 89 schizophrenic patients and compared with normals. The proportion of schizophrenic males having ear lobes hanging free was much less than the control group. This difference is highly significant statistically (p < .0001). Similar was our observation in schizophrenic females (p < .05). Further more number of schizophrenic females had finger hair compared to their normal counter parts which was statistically significant. (p < .025).

Introduction

At the turn of the last century, Gregor Mendel's (1822-1884) revolutionary ideas about the genetic basis for the transmission of physical resemblances between parents and offspring were rediscovered and widely circulated about 35 yrs after the monks garden experiments. We are indebted to Rudin (1916) for the first attempt to study schizophrenia, as differentiated from other psychosis, according to Mendelian principles. From then on numerous studies have been undertaken to establish the genetic basis for the causation of schizophrenia.

However there is paucity of studies on genetically determined somatic traits in schizophrenia, which has prompted the present study.

Aim

Variations between individuals are commonly observed in the characteristics of the genetically determined somatic traits. In the light of this observation, the present study was aimed to assess the characteristics of some of the genetically determined and easily recognised somatic traits in schizophrenic patients and compare them with that of the normals.

Material and Methods

The subjects were schizophrenics who fulfilled the Feighners criteria for schizophrenia (Feighner et al 1972) and attended the Department of Psychiatry, Govt. General Hospital, Madras from January 1981 to April 1982. The cases were new and the age of onset of the illness in them was between 15-45. This age of onset criteria was imposed to avoid possible mixing up of other diagnostic categories like mental retardation, depression, dementia and other organic conditions. 89 schizophrenic patients (M-43, F-46) were thus taken up for the study.

Normal persons (M-108, F-132) who attended the Govt. General Hospital, Madras for other physical ailments like P. U. O., Bronchitis etc. were taken up as control group. The selection was done by random sampling method and cases for whom genetic etiology was a possibility were excluded. Both the groups were from South India and belonged to the same age group. Care was taken to exclude cases suffering from hypoproteinaemia, skin lesions etc. since they are likely to affect the study.

The traits studied were ear lobes, finger hair, and hairy ear. They were analysed as per the guidelines given by Rothwell (1977).

The ear lobes of every individual are described either as hanging free or attached and grouped accordingly. A person will be
declared to possess finger hair only when some hair is present on at least one middle segment of one or more fingers. In some cases a hand lens was used for better clarity. An individual's ear is grouped as hairy ear if one or more hairs are found on any part of the ear.

Results and discussion

Out of the 43 male schizophrenic cases 18(43.90%) had hanging ear lobes where as out of 108 normal males 80(74.08%) possessed hanging ear lobes. This difference is statistically highly significant (p < .001) (Table 1).

| Case         | Hanging       | Attached       | Not classified |
|--------------|---------------|----------------|----------------|
|              | Males         | Females        | Male | Female | Male | Female |
| Schizophrenics | 18            | 30             | 23   | 13     | 2    | 3      |
|              | (43.90)       | (65.22)        | (56.10)| (34.78) |       |        |
| Normals      | 80            | 106            | 28   | 26     |      |        |
|              | (74.09)       | (80.30)        | (25.92)| (19.70) |      |        |

Our observation in schizophrenic females too was in this direction, for out of the 46 female schizophrenics 30(65.22 %) had hanging ear lobes where as out of the 132 normal females 106(80.30 %) had their ear lobes hanging making the difference statistically significant (p < .05). However when schizophrenics with hanging and attached ear lobes were compared with one another, though it was found among the male schizophrenics lesser number of hanging and more number of attached ear lobes, among the female schizophrenics it was the reverse. In the females the possibility of misinterpretation, due to their habit of wearing ear rings, requires restraint in drawing conclusions. It is to be noted that hanging free ear lobes are inherited as a dominant trait and attached ear lobe as recessive (Rothwell 1977).

When the finger hair was examined it was observed that of the 46 female schi-

| Case         | Present       | Absent         | Not classified |
|--------------|---------------|----------------|----------------|
|              | Males         | Females        | Male | Female | Male | Female |
| Schizophrenics | 19            | 20             | 21   | 23     | 3    | 3      |
| Normals      | 49            | 36             | 59   | 96     |      |        |

Figures in parenthesis indicate percentage.
The results of the analysis of hairy ear indicate no significant difference in either sex. The statistical assistance rendered by Mr. Srinivasan, Statistician, Govt. General Hospital, Madras.

Table 3

|                  | Present | Absent | Not classified |
|------------------|---------|--------|---------------|
|                  | Males   | Females| Males         | Females |
| Schizophrenics   |         |        |               |         |
| N - 89           | 11      |        | 40            | 43      |
| M - 43, F - 46   | (26.84) |        | (73.16)       | (100)   |
| Normals          |         |        |               |         |
| N - 240          | 30      | 1      | 78            | 131     |
| M - 108, F - 132 | (28.15) | (0.76) | (71.85)       | (99.24) |
|                  | t = 1.6000 | t = 0.5846 | N.S.    | N.S. |

Figures in parenthesis indicate percentage.

Conclusion

In the wake of the recent observations of changes in the characteristics of genetic markers in schizophrenia, the present study pleads for the analysis of various other genetically determined traits including the ones mentioned here, since these also could serve as genetic markers and contribute for the genetic hypothesis of schizophrenia.

Acknowledgement

The author records his sincere thanks to

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