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CHANGING PSYCHIATRIC MANIFESTATIONS OF NEUROSYPHILIS OVER A PERIOD OF 23 YEARS[1]

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SUMMARY

Cases diagnosed as general paralysis of insane at the psychiatric services of NIMHANS for 23 years from 1955 to 1977 were studied to analyse the trends of age distribution, sex proportion, annual admission rate and clinical categories.

It was found that the mean age and the proportion of females did not show any *impressive* change during these years.

Among the clinical categories the simple dementia type showed a *considerable* rise over the years.

The acute confusional type showed a definite decrease during this period. A less impressive but definite decrease was found in the expansive type. Depressive form of GPI found in a considerable proportion of cases earlier has rarely been seen over the last one decade.

The schizophrenic type has not shown any significant change.

These findings are discussed in comparison with the earlier studies both in India and abroad. The possible causes of these trends are outlined.

Neurosyphilis was first described in 1798 by Haslam in England, and after it by various workers at different centres have reported its changing clinical presentation. Before 1870 the grandiose form of GPI was the most common in continental Europe (Dewhurst, 1969). It was gradually replaced in frequency by the dementing type (Krafft-Ebbing, 1866). In Britain the grandiose type of GPI ceased to be the most frequent variety in the early years of this century (Power, 1930). At Oslo, Freshang and Ytrehus (1956) reported a reduction of expansive type from 10% to 4% between 1915 and 1954. In our country Varma (1952) recognised only two varieties of GPI namely maniacal (57.5%) and confusional (42.5%) in his clinical material. In later years, however, Venkoba Rao (1958, 1972) reported that simple dementing type was the commonest type, and according to him, "all that is grandiose is not paretic." In an earlier paper (Narayanan *et al.*, 1973) it had been observed that the grandiose type formed considerable proportion of cases of neurosyphilis (34.5%). It has been the observation of the present authors that there has been a perceptible change in the clinical patterns of general paresis over the years. The present study is an attempt to quantitatively examine this clinical observation.

MATERIAL AND METHODS

Cases diagnosed as neurosyphilis at the psychiatric services of the NIMHNS, Bangalore between 1955 and 1977 (both years inclusive), i.e. for a period of 23 years formed the material for this study. Up to 1971, these cases formed the basis for an earlier descriptive report on GPI Narayanan *et al.*, 1973). Only such cases with a positive CSF-VDRL of 1 : 8 or more were included. In all cases except 6, the blood VDRL was positive, the 6 cases with negative blood serology, were strongly clinically suggestive of neurosyphilis, and were positive on CSF VDRL testing. 262

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cases had raised CSF protein and 240 cases had increased lymphocyte count—the Lange Colloidal gold test was performed in a very small proportion of cases. A total of 306 cases were included in this study. We cannot, however, exclude the possibility of some biologically false positive cases, though this is very unlikely with the criterion of more than 1 : 8 dilusion being positive.

The case records were studied independently by all the three investigators to categorise the clinical form of presentation. The cases were divided into the following categories : expansive, schizophrenic, simple dementia, acute confusional and depressive types. There was no difference of opinion on the clinical types among the investigators, in any case. Cases with mixed presentation were categorised as unclassifiable. The percentage of different clinical categories, the mean age and sex distribution and the total number of admissions were computed for each year and then graphically represented.

RESULTS

The total number of patients studied was 306 of which 37 are females (12%). The mean age was 41.3. The percentages of different diagnostic categories can be seen in Table in comparison with the previous reports and the earlier findings of the authors.

TABLE—*Proportion of diagnostic categories in G. P. I. in percentages*

Category	Dewhurst (1969)	Venkoba Rao (1972)	H.S. Narayanan (1973)	Present Study
Expansive	16.4	20.5	34.6	31.2
Schizophrenic	..	9	16.6	17
Depressive	27.4	..	1.6	2.3
Simple Dementia	20.8	55.9	25.8	30.2
Confusional	..	..	16.2	11.8
Other	35.2	14.6	4.6	7.5

The proportion of females were studied annually from 1955 to 1977, and did not show any definite trend.

When the mean ages of patients admitted with GPI in the consecutive years were graphically represented it was found that there was no appreciable change over the years.

The proportions (in percentages) of different diagnostic categories of general paralysis of insane were plotted against each year, and the trends noted. The most impressive trend was noticed in the category of simple dementia, which tended to rise considerably, forming the most predominant type in recent years. Expansive type showed a less impressive decline in prevalence ; acute confusional type also showed a definite decline over these years. Depressive type, initially observed in a considerable proportion of cases has hardly ever been encountered in the last decade. Schizophrenic type has not shown any impressive trend. The number of admissions of GPI has shown a declining trend with a slight increase in the recent years.

DISCUSSION

Sir Humphrey Rolliston observed that many diseases have undergone modifications in form, severity and prevalence in course of time (Rolliston, 1927). Such modifications may be ascribed either to changes in the habits or constitution of the host or to changes in an infecting organism. There is evidence that after its first definite recognition 180 years ago, neurosyphilis has shown gradual modifications in clinical form and a recent natural decline in its prevalence. It has been suggested that general paralysis of insane may be a new disease arising from mutation of the syphilitic orgaism towards the end of the 18th century. Such a mutant strain might have spread from a centre somewhere in northern France (Hare, 1959). This explains changes in form and prevalence that have been noted at varying times in different countries. In

view of the wide differences in patterns of clinical presentation of this disease at different times by different workers in India, we had reason to suspect a change in clinical pattern here also. This study shows that there have in fact been certain changes over the years.

The decline in the annual admission rates of GPI is obviously due to the advent of antisyphilitic chemotherapy. We did not find any significant change in sex distribution over the years in contrast to earlier reports of change towards male preponderance (Hare, 1959).

The changes in the patterns of clinical presentation of GPI are quite interesting. The gradual decline in the expansive type, the depressive type and the confusional types and the increasing preponderance of simple dementia type deserve explanation. It has been known that when a population is exposed to infection by a new virulant organism the resulting disease tends, in the course of years, to undergo an evolution from forms which are acute and severe to those which are milder and more chronic. The reduction of acute and severe forms of GPI might be because of more frequent intake of antibiotics for inter-current infections (Hare, 1959). It might also be due to changes in the immunological apparatus of the host or due to the changes in the virulence of the organism. The reduction of grandiose and depressive forms could be due to changes in cultural beliefs in a fast changing society like ours. These explanations remain only as hypotheses at this stage and need further investigation.

It has, however, be admitted that this study suffers from the usual limitations of any retrospective study—changing pattern of psychiatric diagnosis ; this weakness, however, is limited by the fact that many of the cases have been personally seen by one of the authors.

In conclusion this study suggests that GPI in a relatively short time has shown marked changes in prevalence and clinical characteristics. The previous clinical assumption that GPI commonly presents with grandiose ideas needs revision in the light of these findings.

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REFERENCES

DEWHURST, K. (1969). Nerosyphilitic Psychoses Today. Brit. J. Psychiat., 115, 31.

FROSHANG, H. & YTREHUS, A. (1956). A study of general Paralysis with special reference to the reasons for the admission of these patients to hospital. Acta. Psychiat. Neurol. Scand., 31.

HARE, E. H. (1959). Origin and spread of Dementia Paralytica. J. Ment. Sci., 105, 594.

HASLAM, J. (1798). Observation on Insanity. London.

KRAFFT, E. (1866). Dementia Paralytica—Zeitschr. F. Psychiat., 23, 627.

NARAYANAN, H. S., REDDY, G. N. N., & RAO, B.S.S.R. (1973). A Review of 240 cases of General Paralysis of Insane. Ind. J. Psychiat., 15, 374.

POWER, T. D. (1930). The Aetiology of General Paresis of Insane. J. of Mental Sc., 76, 524.

ROLLISTON, H. (1927). Changes in Clinical Aspects of Disease. Brit. Med. J., I, 87.

VARMA, L. P. (1952). The incidence and Clinical Feature of GPI. Ind. J. Neurol. Psychiat., 3, 141.

VENKOBA RAO, A. (1958). Some Observations on the incidence and clinical features of general paresis of insane. Current Medical Practice, 2, 533.

VENKOBA RAO, A., RANGANATHAN, P. S., & NATARAJAN, M. (1972). General Paresis in the Psychiatric Department of a General Hospital in India.Brit. J. Psychiat., 121, 143.