PHENOMENOLOGICAL STUDY OF LATE-ONSET SCHIZOPHRENIA

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ABSTRACT

The phenomenological presentation of late-onset schizophrenia is a topic of considerable debate. This study aims to look at the clinical presentation of late-onset schizophrenia. Charts of all subjects who received a diagnosis of schizophrenia between January 1990 and December 1993 with age of onset being 45 or more were systematically analysed using the OPCRIT checklist. Of the 89 subjects chosen for analysis, 59 satisfied the ICD-10 DCR criteria for schizophrenia and formed the sample of the study. Of them, 20 were males and 39 were females. The mean age of onset for males was 51.6±5.7 years and for females, 53.2±6.7 years. The commonest phenomenon was persecutory delusion (83%) followed by delusion of influence and hallucinations in any modality (66%each). 53% of the subjects had third person auditory hallucinations, while 42% showed negative symptoms. Delusional perception and thought echo were not found in any subject. The implications of these phenomenological findings are discussed.

Key Words : Schizophrenia, Late-Life, Phenomenology

INTRODUCTION

The European psychiatrists have long recognised the late onset variety of schizophrenia (Bleuler, 1978; Roth , 1995) ; however, the late-onset variety had largely been ignored, especially by North American psychiatrists, due at least in part, to the tacit acceptance that schizophrenia cannot manifest after 45 years of age. This view was reflected in the criteria for schizophrenia in the Diagnostic and Statistical Manual of Mental Disorders-third edition (DSM-III) (American Psychiatric Association, 1980). However, the revised edition of the DSM-III (American Psychiatric Association, 1987) has recognised the occurrence of late-onset schizophrenia (Harris and Jeste, 1988), it was estimated that around 20% of patients had onset after age 40. Subsequent studies (Harris and Jeste, 1988 ; Castle and Murray, 1993 ; Pearlson et al 1989 and Howard et al 1993) have recognised similar but not identical clinical presentations compared to early-onset schizophrenia. In all the three studies, the most common symp-toms were delusions and hallucinations. Loosening of associations and inappropriate affect were uncommon features of late-onset schizophrenic illness. Negative symptoms have also been reported to be less common in late-onset schizophrenics. Another striking finding is the preponderance of female population among late-onset schizophrenics.

There is paucity of literature on the clinical manifestations of late-onset schizophrenic illness in the Indian population. The aim of this study is to look at the phenomenology of late-onset schizophrenia in Indian population.

METHODS

The sample of the present study was taken from the population attending psychiatric services of NIMHANS, Bangalore, between January 1990 and December 1993 (4 years). During this period, 32,739 subjects were registered for psychiatric illnesses. Of these, 2,552 subjects (7.8%) received a chart diagnosis of schizophrenia ac-

cording to ICD-9/ICD-10. From among these subjects with a chart diagnosis of schizophrenia,89 (3.49%) had onset of illness at 45 years of age or later. The clinical charts of all these 89 subjects were systematically analysed using the OPCRIT checklist (McGuffin et al., 1991). The charts were rated independently by three investigators (M.G. Harish, K.P. Suresh, I. Rajan) and consensus diagnosis was reached by the same group of investigators. No formal exercises of reliability were conducted due to logistic problems. The OPCRIT consists of the items contained in five sets of criteria covering schizophrenia and affective illness, two commonly applied definitions of schizophrenia and a version of the French criteria for non affective psychosis. Of the 89 subjects chosen for analysis 59 satisfied the ICD-10 Diagnostic Criteria for Research (World Health Organisation, 1993) for schizophrenia and formed the sample of this study. The remaining 30 patients did not satisfy the ICD-10 DCR criteria for schizophrenia. Exclusion criteria for all the subjects included evidence of organic disorders that could explain the patient's symptoms. Age at onset is defined as a change from a state without psychotic features to a clearly abnormal psychotic state as evidenced by the presence of any of the characteristic cymptoms of ICD-10 DCR for schizophrenia (F20, a to h).

RESULTS

Of the 59 subjects, 20 (34%) were males and 39 (66%) were females (X^2 - 6.12 P = 0.05). All but one subject were married. Forty five subjects (76%) were employed and the rest unemployed. The mean age of onset for males was 51.6 ± 5.7 years (range 45-65 years) and for females 53.21 + 5.7 years (range 45-66 years). The most common symptoms were delusions and hallucinations. Persecutory delusions (83%) and delusions of influence (66%) were the commonest delusions. Third person auditory hallucinations and running commentary auditory hallucinations were present in 52% and 10% of the subjects respectively. Formal thought disorder, negative

symptoms, blunted affect and inappropriate affect were represented in 13% , 42%, 54%, and 28% of the population respectively. A detailed symptom analysis is presented in Table. 1. Frequency of occurrence of symptoms was compared across sexes using the Fisher's exact test and chi square test (Table 1). There was no significant difference between the sexes for any of the symptoms.

Table-1
SYMPTOM PROFILE ACCORDING TO OPCRIT

	Male	Female	Total	P.Value
DELUSIONS (ANY)	17 (85%)	33 92%)	53 (90%)	0.90
PERSECUTION	16 (80%)	33 (85%)	49 (83%)	0.97
INFLUENCE	10(50%)	29(74%)	39(66%)	0.97
GRANDIOSITY	2((10%)	3(8%)	5(8%)	0.82
PASSIVITY	0(0%)	3(8%)	3(5%)	0.30
BIZARRE DELUSION	2(10%)	1(3%)	3(5%)	0.24
SOMATIC PASSIVITY	0(0%)	1(3%)	1(2%)	0.68
CONTROL	1(5%)	0(0%)	1(2%)	0.32
HALLUCINATIONS (ANY)	15(75%)	24(62%)	39(66%)	0.09
RUNNING COMMENTARY	2(10%)	4(10%)	6(10%)	0.72
III PERSON AUDITORY*	13(65%)	18(46%)	31(53%)	>0.05
THOUGHT ECHO	0(0%)	0(0%)	0(0%)	---
HALLUCINATIONS IN OTHER MODALITIES	1(5%)	2(5%)	3(5%)	0.76
FORMAL THOUGHT DISORDER	4(20%)	4(10%)	8(14%)	0.94
CATATONIA	1(5%)	0(0%)	1(2%)	0.32
NEGATIVE SYMPTOMS*	11(55%)	14(36%)	25(42%)	>0.05
RESTRICTED AFFECT	11(55%)	21(54%)	32(54%)	0.20
BLUNTED AFFECT	1(5%)	1(3%)	2(4%)	0.91
INAPPROPRIATE AFFECT*	6(30%)	11(28%)	17(29%)	>0.05
THOUGHT ALIENATION	1(5%)	6(15%)	7(12%)	0.27
INSERTION	0(0%)	2(5%)	2(4%)	0.46
WITHDRAWAL	0(0%)	1(3%)	1(2%)	0.68
BROADCAST	1(5%)	3(8%)	4(7%)	0.62

DISCUSSION

The clinical description of patients in this series and those in previous reports (Jeste et al, 1988 ; Pearlson et al., 1989 ; Castle and Murray,

1993 ; Howard et al., 1993) are similar, though there are certain striking dissimilarities. The mean age of onset in our subjects is 51.6 years and 53.21 respectively for males and females. This is similar to that of patients described by Jeste et al (1998) and Pearlson et al., (1989) who reported mean age of onset of 54 and 61 years respectively. Women had a later age of onset which is a remarkably consistent finding across studies (Lewine, 1988 ; Castle and Muray, 1993). This similarity in the age of onset is present despite the discrepancies in the definition of "age of onset" across studies. The studies using DSM-III criteria (Jeste et al., 1988 and Pearlson et al., 1989) have used DSM-III difinition of "age of onset" which is quite different from the definition used in this study. According to DSM-III age of onset includes prodromal symptoms also, whereas in this study "age of onset" is defined as a change from a state without psychotic features to a clearly abnormal psychotic state as evidenced by the pesence of any of the characteristic symptoms of ICD-10 DCR for schizophrenia (F 20, a to h). There is preponderance of women (66%) in the study population which again is comparable to the findings of other studies (Castle and Murray, 1993; Howard et al., 1993; and Pearlson et al., 1989) who also reported a higher representation for women in late-onset schizophrenics. This gender difference in late-onset schizophrenics has been attributed by some researchers (Seeman, 1981; Seeman, 1986) to decreased estrogen levels after menopause. It has been proposed that in the reproductive age groups, women are protected by the antidopaminergic effect of estrogens and this protective effect is removed after menopause which is reflected in the overrepresentation of women in late-onset schizophrenics (Hafner et al., 1991).

In our population delusions and hallucinations are the most common symptoms (Table 1) and these findings are in agreement with other studies (Castle and Murray, 1993; Howard et al., 1993; Pearlson et al., 1989 and Jeste et al., 1988) which reported delusions and hallucinations as the com-

mon symptoms of late-onset schizophrenics. On further analysis of the types of delusions, we found certain differences when compared to other studies. Though delusions of persecution were the commonest (83%), delusions of influence were reported in 66% of the subjects which is in sharp contrast to other studies (Howard et al., 1993 and Pearlson et al., 1989) which did not report any. In addition, only 8% had grandiose delusions whereas other studies by Howard et al., 1993 and Pearlson et al., 1989 reported grandiose delusions in 14% and 17% of subjects respectively. Formal thought disorder is present in 14% of the subjects which is in accordance with the relatively low figures reported by other studies (Castle and Murray, 1993; Howard et al., 1993 and Pearlson et al., 1989).

In our study, restricted affect, inappropriate affect and negative symptoms were reported in 54%, 29% and 42% of the subjects respectively. These findings are not consistent with an overall lower prevalance of negative symptoms and restricted affect reported in other published reports (Castle & Murray, 1993 ; Howard et al 1993 : Pearlson et al., 1989). It is evident from Table 1, that few subjects had thought alienation phenomena which is comparable to Howard et al's (1993) findings. In Pearlson et al's (1989) study, there was higher prevalence of hallucinations in modalities other than auditory, whereas in this and another study (Howard et al., 1993), they were not reported. There was no symptom which was distributed significantly differently between sexes. This perhaps suggests that the clinical presentation of late onset schizophrenia is similar in both sexes. The only other study (Howard et al., 1993) which looked at the differences in the clinical presentation between sexes supports the findings of our study. In our series, 76% of subjects were employed and all, but one were married.

The fact that late-onset schizophrenic patients have shown good premorbid adjustment in occupational functioning is consonant with the published literature (Post, 1996 ; Castle and

Murray, 1993). The higher marriage rates could also be due to good premorbid functioning. It has been speculated by some researchers (Castle and Murray, 1993) that early-onset patients perhaps represent a pernicious form of the illness particularly associated with premorbid dysfunction. The higher marriage rate may also merely reflect the late onset of the illness in that group.

The major limitations of this study are it's retrospective design, lack of early onset controls and reliance on clinical charts. One could always argue that the reliability of determination of symptoms from clinical charts is questionable. However, we believe that the quality of clinical charts of this institute (NIMHANS, Bangalore) is at least good enough for determination of presence or absence of symptoms. The symptoms which were not mentioned in the chart were considered to be absent. The instrument (OPCRIT) used in this study has no provision for severity ratings of symptoms and moreover, it is difficult to assess the severity of symptoms from the charts. Another limitation of this study is that no formal inter-rater reliability exercise could be carried out due to logistic problems. However, we feel that the "consensus" approach towards diagnosis, has at least minimised the potential bias.

The study could have benefitted further by the inclusion of the broadest feasible range of other non-organic psychotic disorders (such as schizoaffective disorders, psychotic affective disorders, psychosis NOS, paraphrenias and reactive psychosis) for the chart review in order to avoid bias from preselection according to any single set of diagnostic criteria.

CONCLUSION

We conclude that schizophrenia can manifest for the first time in late life and manifestations of stringently defined schizophrenia is by no means confined to onset at younger ages. Delusions and hallucinations are the common symptoms, in accordance with other published reports. However, in contrast with other reports, our series had a high prevalence of negative symptoms. This study has also reflected the other most consistent finding across studies that women are represented in excess of men in late-onset schizophrenia. Late-onset schizophrenia is similar, but not identical to the early-onset illness, at least in its phenotypic expression.

Late-onset schizophrenia is largely ignored and understudied. Further systematic research into its epidemiology, phenomenology, genetics, other biological and psychosocial issues, and course and outcome are necesary for a better understanding of this condition.

REFERENCES

American Psychiatric Association (1980) *Diagnostic and Statistical Manual of Mental Disorders. Third Edition.* American Psychiatric Association, Washington DC.

American Psychiatric Association (1987) *Diagnostic and Statistical Manual of Mental Disorders. Third Edition Revised.* American Psychiatric Association, Washington DC.

Bleuler, M. (1978) *The Schizophrenic disorder, long term patient and family studies.* Yale University Press, New Haven.

Castle, D.J. and Murray, R.M. (1993) The epidemiology of late-onset schizophrenia. *Schizophrenia Bulletin* 19, 691-700.

Hafner H, Behrens, De Vry J and Gattaz W F (1991) An animal model for the effects of estradiol on dopamie mediated behaviour ' Implication for sex differences in schizophrenia, *Psychiatry Research*, 38: 125-134.

Harris M.J and Jeste D.V. (1988) Late onset schizophrenia, an overview, *Schizophrenia Bulletin*, 14: 39-55.

Howard, R., Castle, D., Wessley, S. and Murray, R. (1993) A comparative study of 470 cases of early-onset and late-onset schizophrenia. *British Journal of Psychiatry* 163 : 352-357.

Jeste, V., Harris, M.J., Pearlson, G.D., Rabins, P. Lesser, I.M., Miller, B., Coles, C. and Yassa, R. (1988) Late-onset schizophrenia : studying clinical validity. *Psychiatric Clinics of North America* 11 : 1-13.

Levin R.J. (1988) Gender and schizophrenia : Ed Nasralia In *"Handbook of Schizophrenia,"* Vol. 3., Amsterdam, Netherlands, Elsevier.

Mc Gulfin. P, Farmar. A and Harvey. I (1991). A polydiagnostic application of operational criteria in studies of psychotic illnesses. Development and reliability of OPCRIT system, *Archieves of General Psychiatry,* 48: 764-770.

Pearlson, G.D., Kreger, L., Rabins, P.V., Chase, G.A., Cohen,B., Wirth, J.B., Schlaepfer, T.B., and Tune L.E. (1989) A chart review study of late-onset and early-onset schizophrenia. *American Journal of Psychiatry* 146 : 1568-1574.

Post.F (1966) ; *Persistent persecutory states of the elderly* Oxford, Pergamon.

Roth.M (1955) : The natural hisotry of mentel disorder in old age, *Journal of Mental Science,* 101 : 281-293.

Seeman.M.V. (1981) : Gender and the onset of schizophrenia : neuro-humoral influence, *Psychiatric Journal of the University of Ottawa ;* 6 : 136-137.

Seeman. M.V (1986) : Current outcome in schizophrenia : Women v/s Men. *Acta Psychiatrica Scandinavica,* 73 : 609-617.

World Health Organisation (1978) : Mental Disorders : glossary and guide to their classification in accordance with the ninth revision of the *International Classification of Diseases,* World Halth organisation, Geneva.

World Health Organisation (1992) : *The ICD-10 classification of mental and behavioural disorders, clinical description and diagnostic guidelines,* World Health Organisation, Geneva.

World Health Organisation (1993) : *The ICD-10 classification of mental and behavioural disordars, Diagnostic Criteria for Research.* World Health Organisation, Geneva.

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