SCHIZOPHRENIA—ARE THEY SCHIZOPHRENIC?

GURMEET SINGH, M.R.C. (Psych.), D.P.M. (Lond.), Dip. Psych. (McGill),
Diplomate American Board of Psychiatry and Neurology

J. S. SACHDEVA, M.D.

When Emil Kraepelin in 1899 gave the clinical description of the two psychoses 'Dementia Praecox' and 'Manic-Depressive Insanity,' he laid not only the foundation of our modern psychiatric taxonomy, but also the roots of our present diagnostic difficulties concerning the clinical forms which do not entirely meet the criteria required for inclusion in one or other of the two groups.

Several workers have commented on the presence of such 'atypical' psychoses and suggested different names for them, such as Schizoaffective psychoses (Kasanin, 1933), Schizophreniform psychoses (Langfeldt, 1937), Cycloid psychoses (Leonhard, 1961), Atypical psychoses (Mitsuda, 1965), and Reactive or good prognosis schizophrenias (McCabe et al., 1972 and McCabe and Stromgren, 1975). Langfeldt suggested a subdivision within the group of schizophrenias—those with the classical picture of dementia praecox with a chronic course and a poor prognosis be called 'true' or process schizophrenias, while those with psychotic episodes of sudden onset, usually in response to a precipitating factor and with an admixture of manic-depressive and confusional symptoms and a good prognosis be termed 'schizophreniform' psychoses. Similarly, in contrast to the 'nuclear' schizophrenia, Kasanin (1933) described an acute psychosis with marked affective symptoms, occurring in previously well integrated individuals, and in the presence of definite environmental stress—generally followed by remissions or full recovery. This relatively benign psychosis is obviously an atypical psychosis with a clinical course similar to the affective disorders, nevertheless, Kasanin does not hesitate to ascribe it to the schizophrenic group. In fact it has found its way into the official classifications as a subtype of schizophrenia (I.C.D. 9-295. 7).

Although Kraepelin had emphasised the course of illness as a major distinction between dementia praecox and M.D.I., subsequent writers starting with Bleuler and Schneider tended to focus more on symptoms which were thought to be characteristic of schizophrenia. The result was to encourage the frequent use of the diagnosis of schizophrenia even if a single symptom or a cluster of symptoms presumed to be pathognomonic of schizophrenia was present.

Pope and Lipinski (1978) in their review of the subject conclude that in the present state of knowledge, there are no known pathognomonic symptoms of schizophrenia, nor even any clusters of symptoms, taken in cross section, as yet adequately demonstrated to be valid in diagnosing schizophrenia. Furthermore, classical schizophrenic symptoms and Schneider's first rank symptoms are reported in 20 per cent to 50 per cent of well validated cases of M.D.I., thus stressing the non-specificity of the so-called 'schizophrenic' symptoms. They suggest that any study of schizophrenia which does not make reference to prognostic, family history, and treatment response criteria must be considered to be contaminated with up to 43 per cent cases of M.D.I. This statement, if correct, has far reaching implications not only because of the large number of patients who would be erroneously labelled as schizophrenic and subjected...
to long term phenothiazine drug treatment with its attendant adverse effects, but also on the futility of much of current research on schizophrenia which uses presenting symptoms alone in making the diagnosis. This would be most relevant in the case of the atypical or so-called schizo-affective psychoses, and is therefore of utmost importance to us in this country, since such acute psychoses are reportedly seen much more frequently in India and other Afro-Asian countries as compared to the west. This has been confirmed recently by the W.H.O. follow-up study of schizophrenia (1979) and has been attributed to a number of factors such as an agricultural economy, little vertical social mobility, presence of extended families, and the absence of community stereotypes of the mentally ill. Before accepting these conclusions and inferences a crucial question that arises is—Could it be that many of these patients labelled as schizophrenic are not really schizophrenic in the sense of true or process schizophrenia, but cases of M.D.I, and hence the better outcome in Afro-Asian countries?

MATERIAL AND METHODS

During 1975-76, out of all acute psychotic patients 50 patients who fulfilled the I.C.D.-8 criteria for schizo affective schizophrenia and in addition the diagnostic research criteria of Welner et al. (1974) for schizo-affective psychosis were taken up for detailed study. In addition, a control group of 100 cases of manic-depressive psychosis and 100 cases of schizophrenia who fulfilled the diagnostic criteria of Feighner et al. (1972) were also taken up for the study.

A detailed history and mental state examination was carried out on each patient, on a standardised proforma, noting down all presenting symptoms. Details of family history of mental illness among the first degree relatives was obtained as far as possible, and their response to treatment in hospital and long term outcome noted. All cases were followed up for a minimum period of four to five years.

OBSERVATIONS

Table 1 shows the age and sex distribution of all cases separately for the different diagnostic categories. There is a relatively greater number of older patients in the M.D.I. group as compared to the other categories, in whom the majority of patients were under thirty years of age. There is no significant sex difference noted among the different patient groups. Table 2 shows

| TABLE 1. Age and sex distribution of all cases |
| Age in years | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|---|---|---|---|
| 10-20 | 13 | 31 | 18 |
| 21-30 | 31 | 31 | 48 |
| 31-40 | 18 | 18 | 4 |
| 41-50 | 26 | 26 | 10 |
| 51-60 | 12 | 12 | 10 |

Sex—
Male:Female 56:44 27:23 27:23 66:34

| TABLE 2. Precipitating factors |
| Precipitating factors | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|---|---|---|---|
| Present | 25 | 25 | 48 |
| Absent | 75 | 75 | 52 |

S.A. Vs. M.D.I. \(X^2=8.01\). d.f.=1, \(p<0.01\).
S.A. Vs. Schiz. \(X^2=27.45\). d.f.=1, \(p<0.001\).

the presence of precipitating factors at the onset of illness. Precipitating factors were much more common among the S.A. group (48 per cent) as compared to 25 per cent in M.D.I. and only 10 per cent in schizophrenia this difference being significant at the \(<0.001\) level.
A large majority of subjects in the S.A. group (74 per cent) were considered to have a normal premorbid personality as compared to around 40 per cent (44 per cent M.D.I., and 42 per cent Schiz) (Table 3) in the

### Table 3. Showing premorbid personality of all cases

| Type of personality | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|---------------------|----------------|-------------|---------------|
|                     | N   | %   | N   | %   | N   | %   |
| Schizoid            | 6   | 6   | 1   | 2   | 40  | 40  |
| Cyclothymic         | 36  | 36  | 8   | 16  | 12  | 12  |
| Obsessive           | 14  | 14  | 4   | 8   | 6   | 6   |
| Sociopathic         |     |     |     |     |     |     |
| Well adjusted       | 44  | 44  | 37  | 74  | 42  | 42  |

Schizoid personality
S.A. Vs. M.D.I. $X^2=4.19$, d.f.=1, NS.
S.A. Vs. Schiz. $X^2=24.23$, d.f.=1, p<0.001.

other two groups. A Schizoid personality was predictably recorded quite frequently in the schizophrenics—40 per cent as compared to 6 per cent in M.D.I. and only 2 per cent in S.A. group. This difference is significant at the <0.001 level. On the other hand, cyclothymic personality was recorded more frequently among the M.D.I. group (36 per cent), as compared to 16 per cent and 12 per cent in the other groups. Thus in terms of premorbid personality the schizo-affectives are closer to the manic depressives.

Table 4 shows the present clinical diagnosis, and the diagnosis at the time of earlier illness episode for which information was available. 34 per cent of the S.A. subjects had a positive history of a previous manic-depressive illness as against only 10 per cent of schizophrenics—the difference being statistically significant (p<0.001). History of a similar atypical psychosis was available in a further 22 per cent of S.A. subjects, but 0 per cent in M.D.I., and schizophrenia.

### Table 4. History of previous episodes of mental illness

| Previous illness | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|------------------|----------------|-------------|---------------|
|                  | N   | %   | N   | %   | N   | %   |
| M.D.I.           | 56  | 56  | 17  | 34  | 10  | 10  |
| Schizophrenia    |     |     | 1   | 2   | 4   | 4   |
| Atypical         |     |     |     |     |     |     |
| psychosis        |     |     |     |     |     |     |
| Nil              | 44  | 44  | 21  | 42  | 86  | 86  |

History of M.D.I
S.A. Vs. M.D.I. $X^2=6.43$, d.f.=1, p<0.5
S.A. Vs. Schiz. $X^2=14.30$, d.f.=1, p<0.001.

Response to treatment in hospital is shown in Table 5. Both the S.A. and M.D.I. groups show a very good recovery rate—74 per cent in S.A. and 80 per cent in M.D.I., as compared to only 8 per cent in schizophrenia. A further 24 per cent of S.A. subjects were improved at time of discharge and were on maintenance treatment, only one patient failed to respond at the end of two months and was transferred to a long stay hospital for continued treatment. The overall response rate to treatment of S.A. group (74 per cent recovered, and 24 per cent improved) is very similar to that for M.D.I. (80 per cent recovered, and 18 per cent improved) whereas it is

### Table 5. Showing response to treatment in hospital

| Response | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|----------|----------------|-------------|---------------|
|          | N   | %   | N   | %   | N   | %   |
| Recovered| 80  | 80  | 37  | 74  | 8   | 8   |
| Improved | 18  | 18  | 12  | 24  | 82  | 82  |
| Unchanged| 2   | 2   | 1   | 2   | 10  | 10  |

Recovered Vs. Non-recovered:
S.A. Vs. M.D.I. $X^2=1.21$, d.f.=1, NS.
S.A. Vs. Schiz. $X^2=53.46$, d.f.=1, p<0.001.
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significantly different from that in schizophrenia ($X^2 = 53.4$, $p < 0.001$). By the end of the 4-5 year follow up period (see Table 6), sixty-eight out of the hundred schizo-

Table 6. Showing development of subsequent illness episodes

| Nature of illness | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|-------------------|----------------|-------------|----------------|
|                   | N %           | N %         | N %           |
| M.D.I.            | 32 32        | 12 24       | 4 4           |
| Schizophrenia     | 1 2          | 64 64       |               |
| Atypical psychosis| .. ..        | 6 12        | .. ..         |
| No illness episode| 68 68        | 31 62       | 32 32         |

Development of effective disorder
S.A. Vs. M.D.I. $X^2 = 0.57$, d.f. = 1, NS
S.A. Vs. Schiz. $X^2 = 3.14$, d.f. = 1, $p < 0.05$

Development of schizophrenic illness
S.A. Vs. M.D.I. $X^2 = 1.25$, d.f. = 1, NS
S.A. Vs. Schiz. $X^2 = 52.18$, d.f. = 1, $p < 0.01$

phrenics had a recurrence or persistence of psychotic symptoms—of these, sixty-four had a typical schizophrenic illness and four developed a M.D.I. The recurrence rate for M.D.I. and S.A. groups was 32 per cent and 38 per cent respectively. All the M.D.I. cases subsequently also had a M.D.I., while in S.A. twelve out of nineteen subjects (63 per cent) subsequently developed a typical M.D.I., six patients again had an atypical schizo-affective type of illness, and only one patient turned out to be schizophrenic. Thus on follow up, the S.A. group, of those who develop a subsequent illness nearly two-thirds suffer from a primary affective disorder, and the remaining from a homotypical illness with only one schizophrenic.

Table 7 shows the number of probands in each of the three groups who had a positive history of either M.D.I., schizophrenia, or an atypical schizo-affective illness in their first or second degree relatives. There was no family history of mental illness in 46

Table 7. History of mental illness in the family

| Type of illness | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|-----------------|----------------|-------------|----------------|
| M.D.I.          | 32 52 13 26 4 4|
| Schizophrenia   | 2 2 1 2 28 28 |
| Atypical psychosis| .. .. 9 18 .. ..|
| Nil.            | 46 46 27 54 68 68 |

Family history of affective disorder
S.A. Vs. M.D.I. $X^2 = 2.66$, d.f. = 1, NS
S.A. Vs. Schiz. $X^2 = 46.50$, d.f. = 1, $p < 0.001$

Family history of schizophrenia
S.A. Vs. M.D.I. $X^2 = 0.38$, d.f. = 1, NS
S.A. Vs. Schiz. $X^2 = 14.44$, d.f. = 1, $p < 0.001$

per cent of M.D.I., 54 per cent S.A. and 68 per cent of schizophrenics. Of the fifty-four probands of M.D.I. who had a family history of mental illness, fifty-two had M.D.I. and two schiz. In contrast, of the thirty-two schizophrenics, with positive family history, twenty-eight had schiz. and four M.D.I. In S.A. group on the other hand the family loading is similar to M.D.I.—a total of 44 per cent having a positive family history of M.D.I. or homotypical illness (26 per cent and 18 per cent), with only 2 per cent having family history of schizophrenia which is identical with the figure for M.D.I. cases, and significantly different from the figures of 28 per cent seen in the schizophrenia groups. Thus the S.A. patients are closer to the M.D.I. although a few have similar a typical type of illness.

Table 8 shows the individual symptoms listed under mood, thinking, delusions and hallucinations, and motor behaviour and sensorium, and the percentage of subjects in each category who showed presence of that particular symptom. The stars indicate those items which are significantly different from the other groups. A look at Table 8 shows that there are six symptoms that are more frequent in S.A. compared to
TABLE 8. Presenting symptoms in percentage of patients

| Symptoms             | M.D.I. (N=100) | S.A. (N=50) | Schiz. (N=100) |
|----------------------|----------------|-------------|---------------|
| Mood                 |                |             |               |
| Sad                  | 74*            | 58*         | 16            |
| Euphoric             | 26*            | 26*         | ..            |
| Irritable            | 11             | 8           | 12            |
| Inappropriate        | ..             | 6           | 46*           |
| In flat              | ..             | ..          | 6*            |
| Fearful              | ..             | ..          | 8*            |
| Thinking             |                |             |               |
| Pessimistic          | 60*            | 54          | 0             |
| Guilt feeling        | 22*            | 24          | ..            |
| Flight/pressure      | 20             | 12          | ..            |
| Thought disorder     | 8              | 24          | ..            |
| Passivity            | ..             | ..          | 6*            |
| Delusions and hallucinations |         |             |               |
| Ideas of reference   | ..             | ..          | 34            |
| Persecution          | 18             | 44          | 70            |
| Grandiosity          | 21*            | 30*         | ..            |
| Magical              | ..             | 8           | 6             |
| Auditory hallucinations | 4           | 18          | 36            |
| Visual hallucinations | ..           | 8           | 24            |
| Tactile hallucinations | ..           | ..          | 4*            |
| Depersonalization    | 14             | 6           | 4             |
| Motor Behaviour and sensation |     |             |               |
| Underactivity        | 58*            | 56*         | 10            |
| Hyperactivity        | 38             | 38          | 29            |
| Gross excitement/violent | 12           | 12          | 34            |
| Withdrawn/pre-occupied | 12           | 12          | 36            |
| Inappropriate/bizarre | 2             | 16          | 44            |
| Catatonic            | 1              | 10          | 30            |
| Distractibility      | 10             | 12          | ..            |
| Perplexity/confusion | ..             | 10*         | ..            |
| Increased religiosity | 2             | ..          | 30*           |
| Muttering and gesturing | ..           | 4           | 52*           |
| Regressed behaviour  | ..             | ..          | 32*           |

The schizophrenic subjects—viz. mood-sad or euphoric, thinking-pessimistic or guilt, delusions of grandiosity, and underactivity. On all these items there is no significant difference between the S.A. and M.D.I. group but significantly different from the schizophrenic group. On the other hand, the following seven symptoms are significantly more often seen in the schizophrenic subjects as compared to the S.A. subjects viz. inappropriate mood, thought disorder, ideas of reference, tactile hallucinations, increased religiosity, muttering and gesturing and regressed behaviour. In addition, the schizophrenic subjects showed flatness or fearful affect, and feelings of passivity which were not seen in any of the other patients. None of the other symptoms including delusions of persecution, auditory and visual hallucinations were discriminatory. Whereas a grossly sad, or euphoric mood is common in M.D.I. and S.A. subjects, inappropriate, flat or fearful mood is seen only in schizo. Thus we can conclude that whereas affective symptoms do significantly differentiate between the schizo-affective and true schizophrenics, except for feelings of passivity, no other so called schizophrenic symptom is of diagnostic value.

Table 9 shows a comparison of our findings with other previously reported studies on the value of specific symptoms in distinguishing the so-called good prognosis or acute/atypical psychosis (including S.A. as defined in the present study) with the poor prognosis or 'process' schizophrenics. It is again seen that the presence of affective symptoms does significantly differentiate between these two groups, while among the so-called schizophrenic symptoms except for feelings of passivity, no other symptoms has any significant discriminatory value.

**DISCUSSION**

Clinical findings of the present study thus clearly demonstrate a marked similarity in the presenting clinical picture of schizo-
TABLE 9. Recent studies relating specific symptoms to prognosis in patients diagnosed as schizophrenic

| Symptoms                        | G. Singh (70 poor prognosis) | McCabe et al. (1972) | Stephens et al. (1966) | Astrup et al. (1962) |
|---------------------------------|-----------------------------|----------------------|------------------------|----------------------|
| Elation/irritability            | .05                         | .01                  | .01                    | .001                 |
| Depression                      | .01                         | .01                  | .01                    | NS                   |
| Psychomotor excitation          | .05                         | .01                  | .01                    | NS                   |
| Psychomotor disturbances        | NS                          | .01                  | NS                    | NS                   |
| Psychomotor inhibition          | .02                         | .05                  | .01                    | .001                 |
| Flight of ideas of pressure of speech | .001                     | .001                | NS                    | NS                   |
| Delusions of guilt              | .001                        | NS                   | .01                    | .01                  |
| Presence of affect as opposed to flatness | .001                     | .05                  | .05                    | .001                 |

A positive history of M.D.I. or a homotypical illness is found in a large number—44 per cent of subjects with a schizo-affective psychosis, while a history of schizophrenia affects and manic-depressive patients, once we ignore the non-discriminatory symptoms (although they may appear more prominent to the observer).

TABLE 10. Family studies of good prognosis schizophrenics Index cases with illness in relatives

| Author          | Year | Sample                | Schiz. | MDI |
|-----------------|------|-----------------------|--------|-----|
| Langfeldt       | 1939 | 18 Schizophreniform   |        | 39  |
|                 |      | 29 Unrecovered schiz. |        | 7   |
| Mitsuda         | 1957 | 131 Manic depressives | 7      | 50  |
|                 |      | 102 Atypical psychosis| 14     | 24  |
|                 |      | 182 Schizophrenia     | 40     | 3   |
| Vaillant        | 1964 | 44 Recovered schiz.   | 0      | 23  |
| Fowler et al.   | 1972 | 28 Good prognosis schiz.| 18    | 61  |
|                 |      | 25 Poor prognosis schiz.| 44    | 16  |
| Clayton et al.  | 1968 | 39 Schizos-affectives | 8      | 54  |
| Present study   |      | 100 Manic depressives | 2      | 52  |
|                 |      | 110 Schizophrenics    | 28     | 4   |
|                 |      | 50 S. A.              | 2      | 26 + (18 atypical). |
is extremely uncommon—2 per cent. In this respect also these patients are akin to M.D.I. Our findings are consistent with those reported previously (see Table 10).

Response to symptomatic treatment is excellent with full recovery in almost all cases within two weeks to two months in both S.A. and M.D.I. patients. A high percentage (80 per cent) of S.A. patients were completely asymptomatic at 4-5 years follow up in spite of repeated attacks, another 16 per cent were improved and on maintenance treatment. What is more striking in the S.A. group in the fact that Lithium was as effective as Neuroleptics in treating the acute psychotic episode. Our finding that Lithium is about equally effective in S.A. and M.D.I. cases is in line with the findings of Prien et al. (1972) and Smulevitch et al. (1974).

Over 60 per cent of all patients diagnosed as schizo-affective are likely to have repeated attacks of an acute psychotic illness. In approximately two-thirds of these, the second episode is clearly manic or depressive in nature, while the remainder tend to have repeated atypical schizo-affective psychosis. Development of a typical schizophrenic illness is uncommon (only one out of fifty patients in the present study). Similarly analysing the diagnosis at time of previous illness—of the twenty-nine illness episodes reported, seventeen were diagnosed as primary affective, eleven atypical psychosis, and one as schizophrenic.

CONCLUSIONS

Our findings thus, do not support the generally held view of schizo-affective disorders being a sub-type of schizophrenia. On the contrary, on the basis of clinical, family history, treatment response and follow-up criteria, it is suggested that they are in fact suffering from a primary affective disorders.

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