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Is 'Schizophrenia, Schizo-Affective Type' a Useful Diagnosis?

Ten Years Experience from Danish Psychiatric Hospitals

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Summary. During the period 1 April 1970 to 31 March 1980, 1,039 admissions (592 males and 447 females) with the main diagnosis schizophrenia, schizo-affective type, were registered in Danish psychiatric hospitals. Based on the Danish Central Psychiatric Register, 114 patients first admitted to psychiatric hospitals in the period 1970 to 1978 with the main diagnosis schizophrenia, schizo-affective type in at least one admission are described. The results show a continued increase in the use of the diagnosis, but the variation in the use both in different psychiatric hospitals and in patients' admission histories is striking. The question, whether the diagnosis is useful in this way, is discussed, and a proposal for a different international classification of schizo-affective psychoses is given.

Key words: Schizo-affective psychosis – Schizophrenia, schizo-affective type – ICD 8 – Psychiatric register – Diagnostic variation

Introduction

There are many different opinions concerning the etiology and delimitation of schizo-affective psychoses (SA), and research results do not give clear directions for their classification (Henriksen 1983).

Some investigations show that SA are a heterogeneous group related to manic-depressive psychosis as well as to schizophrenia (Angst et al. 1979a, 1979b; Angst 1980); some investigations suggest that SA are more related to manic-depressive psychosis (Tsuang et al. 1977; Cohen et al. 1972), others that SA are a subgroup of schizophrenia (Welner et al. 1977, 1979). Further investigations indicate that genetically SA are a homogeneous group with its own characteristics (Perris 1974; Felder 1977). This disagreement among psychiatrists has been described by Kendell (1975) as follows: "They (psychiatrists) may even make a diagnosis of 'schizo-affective illness' which to many clinicians must seem tantamount to making a diagnosis of 'tuberculoplasm' in a patient who has some symptoms suggesting that he has tuberculosis and others suggesting that he has a neoplasm".

Most investigations conclude that SA are unclarified and that more research is required to clarify nosology, genetics, clinical symptoms, treatment and prognosis of SA.

One more reason for further research is that the use of the diagnosis SA varies much more from country to country than that of the diagnosis schizophrenia and manic-depressive disorder, respectively, which makes international comparisons between frequencies of endogenous psychoses almost illusory (Strömgren 1979).

In the *International Classification of Diseases,* ICD-8, (1967) and later the ICD-9 (1977) SA are a subgroup of schizophrenia and include: "A psychosis in which pronounced manic or depressive features are intermingled with schizophrenic features and which tends towards remission without permanent defect, but is prone to recur. The diagnosis should be made only when both the affective and the schizophrenic symptoms are pronounced".

The *Diagnostic and Statistical Manual of Mental Disorders,* DSM III (Spitzer, 1980), grouped SA in "psychotic disorders not elsewhere classified", and it was pointed out that "Future research is needed to determine whether there is a need for this category and if so, how it should be defined and what its relationship is to schizophrenia and affective disorder". Examples of cases that may, according to DSM III, appropriately be diagnosed schizo-affective disorder include: "An episode of affective illness in which preoccupation with a mood-incongruent delusion or hallucination dominates the clinical picture when affective symptoms are no longer present".

In Denmark and in the Nordic countries the ICD-8 was officially accepted shortly after its appearance. The aim of the present study is to describe and analyse the use of the diagnosis SA in Denmark. Problems disclosed during this analysis will obviously not only be of local Danish nature, but are certain to be of relevance in all countries and therefore of considerable general interest, not least for epidemiological studies.

Material and Methods

The national Danish Central Psychiatric Register (Dupont et al. 1974) consists of manual files (comprising abstracts of case histories) and a data processing system (EDP). Since the introduction in 1968 of the Civil Person Registration (CPR), the CPR-number serves as a key to the EDP and as a basis for record linkage. All psychiatric inpatient institutions report all admissions and discharges and supply case history abstracts. In connection with each hospital stay one main diagnosis and up to three alternative diagnoses or subsidiary diagnoses are provided.

The study comprises all admissions carrying a diagnosis (main or alternative) of SA. The period of investigation was the 10-year period 1 April 1970 to 31 March 1980. Only in-

patient admissions were included as registration of day and night admissions in the Central Psychiatric Register did not start until the middle of the investigation period.

The ICD-8th revision (1965) was used as the basis of the diagnostic classification. To simplify the material, the ICD codes were condensed into 15 groups as traditionally used in Danish psychiatric statistics (Weeke et al. 1978) and as listed in Table 4. It should be noted that group No. 10, personality disorder, includes character neuroses, and that group No. 9, neurosis, includes symptom neuroses. Furthermore, the psychiatric register contained groups 16 and 17, which can only be used for subsidiary diagnoses.

In the present investigation the schizophrenia subgroup SA (ICD-8: 295.7) had its own group, No. 18, in order to show

Table 1. All admissions to Danish psychiatric hospitals with the diagnosis schizophrenia, schizo-affective type, as the main or alternative diagnosis

Year (1.4.–31.3.)	Main diagnosis			Alternative diagnosis		
	Males	Females	Total	Males	Females	Total
1970/1971	16	24	40	2	4	6
1971/1972	28	21	49	9	3	12
1972/1973	46	23	69	6	2	8
1973/1974	68	30	98	9	0	9
1974/1975	41	30	71	12	4	16
1975/1976	47	26	73	10	2	12
1976/1977	60	47	107	5	7	12
1977/1978	66	57	123	7	5	12
1978/1979	96	86	182	6	4	10
1979/1980	124	103	227	9	9	18
Total	592	447	1,039[a]	75	40	115

[a] The admissions are distributed on 410 patients (212 males, 198 females)

Table 2. All admissions in Denmark with the main diagnosis schizophrenia, schizo-affective type, distributed over 2-year periods in psychiatric hospitals (A-U)

Psychiatric hospitals	70/72		72/74		74/76		76/78		78/80		Total		Average number of admissions per year
	M	F	M	F	M	F	M	F	M	F	M	F	
A	0	1	0	0	0	1	10	7	8	22	18	31	1,500
B	1	1	1	4	0	0	2	7	5	8	9	20	1,160
C	0	0	1	2	1	0	0	2	7	2	9	6	2,670
D	14	7	22	7	25	8	42	12	71	28	174	62	4,040
E	3	3	4	0	0	4	0	5	0	0	7	12	1,740
F	4	7	13	6	20	5	14	8	30	10	81	36	3,880
G	0	0	0	0	0	0	13	2	11	6	24	8	1,705
H	0	0	0	0	0	0	1	0	2	12	3	12	1,235
I	1	0	3	2	4	2	9	0	11	0	28	4	830
J	1	13	0	13	3	12	3	27	10	40	17	105	1,655
K	0	0	0	0	0	0	2	3	9	17	11	20	2,070
L	2	1	2	0	1	0	3	1	4	1	12	3	1,460
M	3	7	7	5	1	0	3	1	5	0	19	13	1,020
N	2	0	15	2	8	7	1	2	3	0	29	11	685
O	0	0	11	0	1	0	1	4	0	5	13	9	615
P	7	0	21	0	7	0	17	0	24	0	76	0	2,360
Q	2	0	5	1	8	2	2	1	9	1	26	5	1,790
R	2	0	6	1	7	1	1	11	2	5	18	18	1,765
S	0	0	0	0	0	0	0	0	3	12	3	12	445
T	2	0	2	1	1	5	0	3	3	4	8	13	345
U (other)	0	5	1	9	1	9	2	8	3	16	7	47	7,030
Total	44	45	114	53	88	56	126	104	220	189	592	447	40,000

The list (A-U) can be submitted on request
Other: Psychiatric Hospitals with ≤ 3 admissions per 2 year with the diagnosis SA

the variation in the use of this special diagnosis, and was thus not included in group No. 1.

Results

How many Admissions with the Diagnosis SA. Increase – Decrease?

In the period of investigation 1 April 1970 to 31 March 1980, 1,039 admissions (592 males, 447 females) were registered with the main diagnosis SA and 115 admissions with SA as an alternative diagnosis (Table 1). Only 23 of these admissions were first admissions. The total number of psychiatric admissions in Denmark was about 40,000 per year (about 12,000 beds), and admissions with the main diagnosis SA only amounted to about 0.26% of all admissions during the 10 years.

Admissions with the main diagnosis SA comprised 410 patients (212 males, 198 females), and during the 10-year period these patients were admitted in all 3,657 times (2,028 males, 1,629 females). Among these admissions male patients received the diagnosis SA in 29% of the cases, and female patients in 27%.

A continued increase in the use of the diagnosis SA has taken place (Table 1). The total number of admissions with the main diagnosis schizophrenia increased from 3,335 to 4,927 per year in the period of investigation, and admissions with the main diagnosis SA showed a significant increase from 40 to 227. More men than women received the main diagnosis SA, mainly in cases of readmission.

Differences Among Psychiatric Hospitals in the Use of the Diagnosis SA

Table 2 shows the use of the main diagnosis SA in each psychiatric hospital, distributed in 2-year periods. The pattern is very heterogeneous, with some hospitals using the diagnosis quite often, others not at all. Even within the same administrative unit there were great differences in the use over time and between sexes. The use did not even follow a certain pattern compared with the total number of admissions in each psychiatric hospital. Hospitals with a small number of admissions sometimes used the diagnosis more often than larger hospitals.

Variation in the Use of the Diagnosis SA in Each Patient

In order to describe the variation in the use of the diagnosis SA, 114 patients were selected. The criteria for these patients were that *first admission* in a psychiatric hospital in Denmark took place in the first 8 years of the investigation period, and that all these patients in at least one admission were diagnosed SA.

The material of the 65 males and 49 females distributed according to age showed that 67 patients (44 males, 23 females) were between 15 and 29 years old at first admission. In all, the patients were admitted 1,114 times in the 10-year-period with an average of 10 admissions, from 1 admission (4 patients) to 34 admissions (1 patient).

Table 3 shows the admission histories of 4 patients, with special regard to diagnoses on each admission. These patients were selected to display the variation of the diagnoses. The first case illustrates the extreme variation in diagnosis. On admissions No. 31–33 SA was the main diagnosis whereas the other admissions include nine other main diagnostic groups. The main diagnosis SA was used three times at the same hospital, but when the patient was admitted to a different hospital she received a different diagnosis. This patient acquired several additional diagnoses which also varied considerably.

Table 3. Four cases stated by number of admissions, hospitals, main and additional diagnoses

	Woman aged 26 at first admission
Number of admissions	34
Hospitals	R – U – R – U – R – L – R – S – R
Main diagnoses	1, 2, 7, 8, 9, 10, 12, 13, 15, 18
First additional diagnoses	10, 11, 12, 14, 18
Second additional diagnoses	7, 8, 10, 12
Third additional diagnoses	1
	Woman aged 22 at first admission
Number of admissions	28
Hospitals	E – D – E – D – E – D – F
Main diagnoses	1, 7, 8, 10, 12, 14, 18
First additional diagnoses	7, 10, 13, 16
Second additional diagnoses	12, 13, 16
Third additional diagnoses	10
	Woman aged 21 at first admission
Number of admissions	9
Hospitals	I – J – U – J – C
Main diagnoses	1, 2, 18
First additional diagnoses	2, 16
	Man aged 19 at first admission
Number of admissions	16
Hospitals	I – G – I – G – I
Main diagnoses	1, 18
First additional diagnoses	16

Hospital codes as in Table 2
Diagnosis: codes as in Table 4

With regard to variation in diagnoses the second case is almost as confusing as the first case, but here the diagnosis SA was the main diagnosis on five consecutive admissions, even in two different hospitals.

In the third case SA was the main diagnosis on two consecutive admissions and on the other admissions schizophrenia and manic-depressive psychosis were the main diagnoses. These combinations are more understandable and were expected more frequently than they in fact occurred.

The fourth case shows that sometimes SA was used steadily as this diagnosis was stated on 13 admissions, even in two different hospitals.

The Spectrum of Diagnoses in the 114 Patients – and Attempts at Grouping

In Table 4 the main diagnoses and additional diagnoses of all admissions of the 114 patients are listed. In the same table the diagnostic groups used in this investigation are listed as explained in the section of material and methods.

Table 4. A total of 114 patients who, at least once, received the diagnosis schizo-affective psychosis (main and additional diagnoses, all admissions included)

Diagnostic group	Main diagnosis						Additional diagnoses		
	Males		Females		Males + Females		Males	Females	M + F
	All admissions	First admissions	All admissions	First admissions	All admissions	First admissions	All admissions	All admissions	
18	163	5	122	10	285	15	7	4	11
1	217	18	73	5	290	23	14	5	19
2	148	13	115	9	263	22	10	9	19
3	2	0	0	0	2	0	7	2	9
4, 5, 6, 7	10	3	10	1	20	4	7	4	11
8	33	10	54	8	87	18	2	8	10
9	2	1	6	2	8	3	0	0	0
10	26	7	34	4	60	11	31	47	78
11	0	0	1	0	1	0	16	11	27
12	4	1	7	0	11	1	50	19	69
13	0	0	1	0	1	0	38	3	41
14	41	7	33	8	74	15	7	6	13
15	2	0	10	2	12	2	0	2	2
16	—	—	—	—	—	—	10	13	23
17	—	—	—	—	—	—	1	1	2
Total	648	65	466	49	1,114	114	200	134	334

Diagnostic groups (Definitions in terms of ICD codes are available on request)

18. Schizophrenia, schizo-affective type
1. Schizophrenia
2. Manic-depressive psychoses
3. Presenile and senile psychoses
4. Cerebrovascular disease
5. Neurosyphilis
6. Epilepsy
7. Other organic disorders
8. Psychogenic (reactive) psychoses
9. Neuroses
10. Personality disorder
11. Mental deficiency
12. Alcoholism
13. Drug addiction
14. Unclassifiable psychoses
15. Other diagnoses
16. Suicide and attempted suicide[a]
17. Observations (forensic and non-forensic)[a]

[a] Only subsidiary diagnoses

SA was used as the main diagnosis at 15 patients' first admission. The most frequently used diagnoses at first admission were schizophrenia (23) and manic-depressive psychosis (22), but also reactive psychosis (18), unclassifiable psychosis (15) and personality disorder (11) were used frequently.

SA represented about 25% (285) of all main diagnoses. The rest was represented by schizophrenia (290) and manic-depressive psychosis (263), but also reactive psychosis (87), personality disorder (60), unclassifiable psychosis (74) and organic psychosis (20) were noteworthy. If SA was included in schizophrenia, this group dominated among the main diagnoses, 52% (575).

SA represented only 3% (11) of all alternative diagnoses, but it is remarkable that personality disorder (78), alcoholism (69), and drug addiction (41) were so highly represented, probably, however, as subsidiary diagnoses. Mental deficiency (27) was also noteworthy, but represented by only 6 patients.

The combination of SA with the other main diagnostic groups is shown in Table 5 and in Fig. 1 as an approximate Venn-diagram (Wulff 1976).

The main diagnosis SA was not combined with other diagnoses in 5 cases. These patients were characterized by few admissions. In 4 of the cases only 1 admission was seen, and in 1 of the cases 3 admissions due to the shorter observation period of about 1 year.

Table 5. A total of 114 patients in psychiatric hospitals distributed according to combination of main diagnoses

Combination of main diagnoses	Males	Females	Total
A SA	2	3	5
B SA + S	13	1	14
C SA + S + Others (−MD)	17	9	26
D SA + S + MD	3	2	5
E SA + S + MD + Others	10	11	21
F SA + MD	6	6	12
G SA + MD + Others (−S)	8	10	18
H SA + Others (−MD −S)	6	7	13
Total	65	49	114

SA = Schizophrenia, schizo-affective type
S = Schizophrenia
MD = Manic-depressive psychosis

SA combined only with schizophrenia was seen in 14 patients and with schizophrenia and other diagnoses (minus manic-depressive psychosis) in 26 patients. SA combined with schizophrenia and manic-depressive psychosis was seen in 5 patients while the same combination intermingled with other diagnoses was seen in 21 patients. The combination SA with

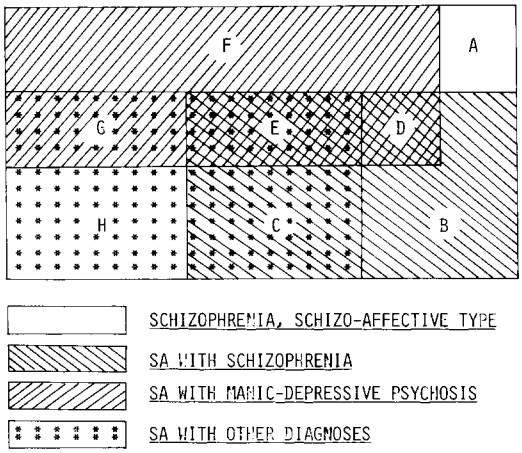

Fig. 1. A total of 114 patients distributed according to combination of main diagnoses as shown in Table 5

manic-depressive psychosis was found in 12 patients and in combination with other diagnoses (minus schizophrenia) in 18 patients. SA combined with other diagnoses (minus schizophrenia and manic-depressive psychosis) was found in 13 patients.

It was striking that SA appeared as the main diagnosis only once in 58 patients and twice in 22 patients. In another 22 cases SA was the main diagnosis three and four times, respectively. In the remaining cases (12) 5–14 admissions had the main diagnosis SA.

Discussion

In Denmark, the diagnosis schizophrenia, schizo-affective type, has been available by classification of diseases since 1966. This study shows a continued increase in the use of the diagnosis in the 10-year period 1 April 1970 to 31 March 1980. This is not surprising as psychiatrists require time to practice a new diagnosis. SA has been the object of several investigations and publications during the last decade, so apparently psychiatrists have been aware of patients with SA. On the other hand, the variation in the use of the diagnosis SA as shown in this study is striking.

Some psychiatrists in psychiatric hospitals use the diagnosis often while others do not use it at all, and this variation even occurs between psychiatrists in two departments in the same hospital. This may be due to the psychiatrists' varying knowledge of and interest in SA, but also to the fact that the symptomatology of SA does not always lead to classification as a subgroup of schizophrenia. In fact, as shown in this study, the group of patients who receive the diagnosis SA, also get diagnoses from the whole spectrum of diagnoses, mostly schizophrenia and manic-depressive psychoses, but also reactive psychoses and unclassifiable psychoses.

The variation in the use of the diagnosis in Denmark may also be said to reflect the confusion found in the literature about the etiology, genetics, clinical symptoms, prognosis and treatment of SA. Psychiatrists who want to use the diagnosis SA just as a symptomatological diagnosis may have difficulties when they do not feel that the patient in case is really schizophrenic and know that if labeled SA the patient will be classified in a subgroup of schizophrenia. Some psychiatrists will, nevertheless, place the patients according to the SA symptomatology, others will refrain from doing so. Consequently, patients of very similar nature will be placed differently by different psychiatrists.

These problems of classification contribute seriously to invalidation of comparative epidemiological studies of the endogeneous psychoses. What can be done in this unpleasant situation?

A radical solution is the one used by DSM III, namely to just place SA among "Psychiatric disorders not elsewhere classified". This solution may be realistic, but represents a rather resigned attitude. A more differentiating solution would be to give the following three options:

1) Schizophrenia, schizo-affective type, code 295.7, in cases supposed to be nosologically related to schizophrenia.
2) Manic-depressive psychosis, schizo-affective type, code 296.7, in cases supposed to be nosologically related to manic-depressive psychosis.
3) Psychosis alia, schizo-affective type, code 298.7, in cases with unclarified nosology.

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