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Follow-up and family study of postpartum psychoses

Part IV: schizophreniform psychoses and brief reactive psychoses: lack of nosological relation to schizophrenia

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Abstract Among 30 women suffering from a postpartum psychosis without affective syndrome, and for whom this episode of illness was the first leading to psychiatric hospitalisation, 19 fulfilled in the long-term course the DSM-III-R criteria for schizophreniform psychosis (SCHF) or brief reactive psychosis (BRP), and 11 fulfilled the criteria for schizophrenia (SCH). The two groups were compared in order to investigate their nosological relation. Patients with SCHF or BRP more often had the symptomatology of cycloid psychoses and signs of confusion, the onset of illness was more frequently abrupt and the age at the index delivery tended to be lower ($p < 0.07$) than in patients with SCH. No case of SCHF or BRP was observed at the index episode that later developed into SCH. These findings, together with the different liability to puerperal decompensations, suggest that SCHF and BRP beginning in the postpartum period are nosologically distinct from SCH.

Key words Schizophrenia · Schizophreniform disorder Brief reactive psychosis · Cycloid psychosis

Introduction

Since Kraepelin (1913) and E. Bleuler (1916), most postpartum psychoses are classified as endogenous (functional) psychoses. There has been considerable variation in the proportion of affective psychoses (AP) and schizophrenia (SCH) found in earlier investigations (Thomas and Gordon 1959). Recent studies using operationalised diagnostic criteria revealed a high percentage of AP and a low proportion of SCH (Meltzer and Kumar 1985; Kendell et al. 1987; Schöpf and Rust 1994; see also Schöpf 1994).

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Unusual symptoms, like signs of confusion, have been described in postpartum psychoses (Brockington et al. 1981; Dean and Kendell 1981). These characteristics, as well as a favourable outcome despite schizophrenic symptoms, have contributed to the classification of postpartum psychoses among "atypical" psychoses, e.g. schizoaffective psychoses (SCHA) (Pauleikhoff 1964; Schöpf et al. 1984), psychogenic psychoses (Arentsen 1968), cycloid psychoses (Leonhard 1985; Perris 1985; Lanzcik et al. 1990) and bouffées délirantes (Ey et al. 1978).

As part of a follow-up and family study on postpartum psychoses (Schöpf and Rust 1994), disorders which in the long-term course fulfilled the DSM-III-R criteria for SCH were compared to other psychoses without predominant affective symptomatology, i.e. DSM-III-R schizophreniform psychoses (SCHF) and brief reactive psychoses (BRP), in order to investigate their nosological relation.

Method

The whole sample of 119 patients and 542 first-degree relatives is described in detail elsewhere (Schöpf and Rust 1994). The index episode began within 3 months following delivery and was the first decompensation leading to psychiatric hospitalisation. The patients were hospitalised at the Psychiatric University Hospital of Lausanne between 1949 and 1980 or at the Psychiatric University Hospital of Zurich between 1956 and 1964, and followed up after a mean of 21 years (range 2–35 years). Patients were classified using the DSM-III-R considering the long-term course.

Results

Among the 30 of the 119 patients not classified as suffering from AP or SCHA, 19 fulfilled in the long-term course the DSM-III-R criteria for SCHF ($n = 14$) or BRP $n = 5$), and 11 fulfilled the criteria for SCH. Characteristics of the two groups are shown in Table 1. In 18 of the 19 patients (95%) with SCHF or BRP, the same diagnosis had already been given at the index episode. This was only the case in 2 of the 11 patients with SCH in the long-

Table 1 Characteristics of patients with SCHF or BRP compared to patients with SCH (nominal values in %, quantitative data $x \pm s$). For the exact definitions of items see Schöpf and Rust (1994). (*D* depression; *DSCH* schizoaffective depression; *SCHF* schizophreniform psychosis; *BRP* brief reaction psychosis; *SCH* schizophrenia)

	SCHF or BRP ($n = 19$)	SCH ($n = 11$)	p-value	Correlation
Index episode, personal history				
DSM-III-R diagnoses:				
D/DSCH/SCHF or BRP/SCH	0/5/95/0	64/18/0/18	†	0.95 (5)
Cycloid psychosis	74	0	0.001 (1)	0.71 (5)
Confuso-oneiroid syndrome	68	9	0.003 (1)	0.57 (5)
Paranoid syndrome	5	64	0.003 (4)	0.64 (5)
Acute onset	89	18	0.001 (4)	0.71 (5)
Early onset	89	64	n.s. (4)	0.31 (5)
Age at delivery	25.8 ± 4.3	29.4 ± 6.2	n.s. (3)	0.33 (6)
Primiparae	58	45	n.s. (1)	0.12 (5)
Psychopathology during index gravidity	11	27	n.s. (4)	0.22 (5)
Previous psychotic episodes	0	0	n.s. (4)	0.00 (5)
Follow-up				
Nonpuerperal relapses	32	91	0.003 (1)	0.57 (5)
Global psychopathological outcome	0.4 ± 0.5	2.3 ± 1.0	0.001 (2)[a]	††
Duration of follow-up (duration of survival in patients who had died)	20.7 ± 8.5	21.9 ± 10.4	n.s. (3)	0.04 (6)
Family history				
Family history of functional psychoses	16	36	n.s. (4)	0.23 (5)
Global morbidity risk	5.1	8.0	n.s. (4)	0.06 (5)
Morbidity risk for DSM-III-R schizophrenia	1.3	2.0	n.s. (4)	0.03 (5)
Morbidity risk for DSM-III-R SCHF or BRP	3.8	4.0[b]	n.s. (4)	0.01 (5)

[a] Approximate measure (ordinal scale niveau); [b] two cases with short-lasting psychoses not otherwise specified are included

† = The global χ^2 test may not be applied reliably due to expected frequency <5 in >20% of cells. †† = Due to variance heterogeneity the effect size could not be determined. *Statistical tests:* (1) χ^2; (2) *u*-test; (3) *t*-test; (4) Fischer-Yates test; (5) phi coefficient; (6) point-biserial correlation coefficient

term course (18%); the other patients had a depressive syndrome – pure or combined with schizophrenic symptoms. The two groups also differed regarding the presence of a cycloid psychosis, a confuso-oneiroid syndrome, an abrupt onset of illness and a paranoid syndrome. The age at the index delivery, which was identical to the age at the first episode of illness, was lower in patients with SCHF or BRP, the difference to patients with SCH almost reaching statistical significance ($p < 0.07$).

The duration of the index episode was longer in patients with SCH than in patients with SCHF or BRP; this finding is partially related to the diagnostic criteria. Only 2 patients of the former group had an index episode of less than 6 months. The duration in the cases of SCHF or BRP was 6 weeks or less in 6 patients, 6 weeks–3 months in 10 patients and 3–6 months in 3 patients.

Of the 11 patients with SCH, 10 (91%) had nonpuerperal relapses, compared to 6 of the 19 patients (32%) with SCHF or BRP, the difference being statistically significant (Table 1). No case with the diagnosis of SCHF or BRP at the index episode developed later into SCH. The global outcome was significantly more unfavourable in patients with SCH. The global morbidity risk for functional psychoses in the relatives of the two groups did not show noticeable differences (Table 1).

Discussion

In this investigation on postpartum psychoses, fewer cases of SCH ($n = 11$) were found than SCHF ($n = 14$) or BRP ($n = 5$). This is in contrast to the general frequency of these psychoses. For example, in the Epidemiological Catchment Area Study, the life-time risk of SCH was 1.3%, and that of SCHF 0.2% (Keith et al. 1991). The diagnosis of BRP is very rare and occurs much more infrequently than SCHF (Jauch and Carpenter 1988b).

There were characteristics of SCHF and BRP with puerperal onset which distinguished them from SCH beginning in the postpartum period. The symptomatology of cycloid psychoses, a confuso-oneiroid syndrome and an abrupt onset of illness were overrepresented among the former. The high frequency of cycloid psychoses and signs of confusion among postpartum psychoses have been described by other investigators (Grosse 1968; Lanczik et al. 1990; Leonhard 1985).

The age at the index delivery and at the first episode of illness was lower in patients with SCHF or BRP than in

patients with SCH. The difference almost reached statistical significance. If the group of SCHF and BRP, and that of narrowly defined SCH, were variants of the same disorder, one would expect the opposite difference of age at onset, because in SCH early onset is associated with poor prognosis. An early age of onset in schizophrenic patients has been found to be a predictor of clinical and cognitive impairments (Johnstone et al. 1989).

It is to be emphasised that there were no cases with transition from SCHF or BRP into SCH in the long-term course.

The family study does not permit drawing conclusions concerning the nosological relation of the two groups. The global morbidity risk for functional psychoses was slightly and nonsignificantly lower in relatives of patients with SCHF or BRP compared to the group with SCH. Such a difference would be compatible with the idea that SCHF and BRP are a benign form of SCH, with the variations of the course of illness being explained by the diathesis-stress model of functional psychoses (see also Schöpf and Rust 1994). However, other findings of this study argue against this possibility. The results on the age at onset have been mentioned previously. Furthermore, as expression of an increased liability to puerperal decompensations, SCH should have been much more frequent than SCHF or BRP, whereas the contrary was found.

Due to the limited knowledge on the aetiology of functional psychoses, their classification still relies on clinical characteristics. It appears justifiable to consider SCHF and BRP beginning in the postpartum period as nosologically separate from SCH for the following reasons: (1) SCHF and BRP were more prone to puerperal onset that SCH. (2) There were differences in the two groups with respect to symptomatology, mode of onset and age at the onset. (3) In the long-term course there was no transition of SCHF and BRP into schizophrenia. Whether the distinction of SCHF from BRP is valid cannot be answered because of small samples.

Little can be said on factors positively linked to the aetiology of SCHF and BRP with puerperal onset. SCHF according to DSM-III-R is not a well-defined disease entity. A proportion of cases later fulfil the criteria for SCH (Coryell and Tsuang 1982). Family studies suggest a relation to AP (Fogelson 1982; Taylor and Abrams 1984; Sautter and Garver 1985) possibly to the relative exclusion of bipolar disorders (Pulver et al. 1991) or a relation to SCH (Coryell and Tsuang 1982; Kendler et al. 1986), but little homotypical transmission occurs. Data on the nosological status of BRP are lacking (e.g. Jauch and Carpenter 1988a, b; Beighley et al. 1992).

In this investigation most of the SCHF and BRP fulfilled the criteria for cycloid psychoses. It is not known to what extent these diagnoses overlap in nonpuerperal psychoses. According to Leonhard (1986), cycloid psychosis is a disease entity distinct from SCH and AP, and is characterised by a special symptomatology with episodes of illness separated by full remission and a homotypical heredity. However, insufficient empirical data exist on this disease concept (e.g. Perris 1988). The cycloid psychoses examined in this paper are a subgroup of this diagnostic category without strong affective component. The other cases were classified among SCHF and some also among AP. Only 32% of the subgroup described here had nonpuerperal episodes. Cycloid psychoses are generally characterised by a high frequency of relapses (Perris 1974).

The good prognosis of nonaffective functional psychoses beginning in the postpartum period has practical consequences. The short duration of the index episode and the low recurrence rate do not necessitate following strictly the recommendation for first-episode schizophrenics to continue neuroleptic drugs for at least 1 year. Neuroleptics may be progressively decreased when remission has been obtained for a few weeks. However, it is advisable to continue the treatment until menstruation has resumed, because this hormonal event may lead to a transitory relapse (Kumar 1993).

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