

Schizoaffective Disorders with and without Onset in the Puerperium

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Summary. The premorbid and sociodemographic features, long-term course and long-term outcome (on average 23.8 resp. 26.8 years after onset of illness) were compared in 30 female schizoaffective patients with onset of their illness during the puerperium and 60 female schizoaffective patients with onset at other times. The majority of premorbid and sociodemographic variables as well as course parameters were similar in the two groups. Most of the few differences (in age at first manifestation, marital state at onset, presence of stable heterosexual relationship before onset, acuteness of onset, presence of life events) are closely connected with the inclusion and exclusion criteria applied for the puerperal disorders (exclusion of patients with preexisting illness or psychiatric symptoms during pregnancy, inclusion only if onset was within 6 weeks of parturition). The puerperal schizoaffective disorders began more frequently with a schizomanic episode and less frequently with a schizodepressive episode than did the non-puerperal schizoaffective disorders, a finding which perhaps reflected the “pathoplastic” role of the puerperium on psychotic disorders. Several significant differences were found regarding the long-term outcome (frequency of persistent alterations, level of global functioning and disability, non-achievement of the expected social development, loss of autarky), confirming earlier findings that puerperal disorders generally have a better outcome than other psychotic disorders.

Key words: Schizoaffective disorders – With and without onset postpartum – Sociodemographic and premorbid features – Long-term course – Long-term outcome

Introduction

In the past few decades, the common opinion with regard to the nosology of puerperal disorders has been that they are not a distinct disease entity (Brockington et al. 1981; Fondeur et al. 1957; McGorry and Connell 1990; Protheroe 1969; Seager 1960), although the puerperium has been discussed as a possible pathoplastic factor

(Katona 1982; McNeil 1986). Some authors base this opinion on comparison of acute psychotic episodes post partum (e.g., Dean and Kendell 1981), others on follow-up studies (Fondeur et al. 1957; Müller 1985; Protheroe 1969; Schöpf et al. 1984) or on family studies (Dean et al. 1989). Regarding prognosis, it became clear that the outcome depends on the phenomenology or the diagnosis of the disorder (e.g., Da Silva and Johnstone 1981; Schöpf et al. 1984), although in general the prognosis of puerperal psychosis was found to be better than that of other psychotic disorders (Arentsen 1968; Davidson and Robertson 1985; McGorry and Connell 1990; Paffenbarger 1964; Protheroe 1969; Schöpf et al. 1984; Wilson et al. 1972). Nevertheless, to our knowledge there have been no long-term investigations which compare narrowly defined disorders with and without onset during puerperium using standardised instruments of evaluation and statistical methods. The aims of the present study were therefore to investigate two groups of disorders with and without onset during puerperium, using similar definitions, instruments and methods of evaluation, and to compare premorbid and sociodemographic features, long-term course and long-term outcome.

Schizoaffective disorders seem to be a prominent type of functional psychotic disorder in the puerperium (Arentsen 1968; Brockington et al. 1981; Martin 1958; Rohde et al. 1992; Schöpf et al. 1984). The present investigation presents the findings to 90 female inpatients fulfilling the diagnostic criteria of schizoaffective disorder, 30 of them with and 60 without onset in puerperium.

Material and Methods

Study Population. 86 patients who were diagnosed as “puerperal psychosis” between 1950 and 1979 at the University Hospital of Cologne and Bonn were investigated regarding their long-term course. Strict inclusion criteria were applied:

- a) onset within 6 weeks of parturition,
- b) no previous mental illness, and
- c) no psychiatric symptoms during pregnancy.

61 of these women (87% of those still living) could be investigated at an average of 25.6 years after the puerperal psychosis (range 12–41 years). 30 were diagnosed longitudinally as having schizoaffective disorders (see next section). We compared these 30 “puerperal schizoaffective” patients with 60 female schizoaffective

Table 1. Premorbid and sociodemographic data of schizoaffective psychoses with and without onset during puerperium

	Female schizo-affective patients		<i>P</i>
	with onset in puer-perium (<i>n</i> = 30)	without onset in puer-perium (<i>n</i> = 60)	
Age at first manifestation			0.000 ^a
Up to 25 years	63.3%	33.3%	
26–35 years	33.3%	28.3%	
> 35 years	3.3%	38.3%	
Mean	25.2	31.4	0.000 ^b
Standard deviation	4.1	10.4	
Median	25	29	
Minimum	18	16	
Maximum	36	58	
Age at first manifestation (only patients below 40 years compared)			ns ^b
Mean	25.2	27.5	
Standard deviation	4.1	7.1	
Median	25	27	
Minimum	18	16	
Maximum	36	39	
Educational level (c)			ns ^a
– Very low	0	6.7%	
– Low	37.9%	53.3%	
– Middle	17.2%	16.7%	
– High	44.8%	23.3%	
Occupation at onset			ns ^a
– Unskilled worker	6.7%	10.0%	
– Skilled worker	6.7%	5.0%	
– White collar worker	33.3%	21.7%	
– Top white collar worker	3.3%	6.7%	
– Self-employed	3.3%	0	
– Without paid occupation (incl. house wives)	46.7%	56.7%	
Premorbid personality			ns ^a
– Obsessoid	24.1%	30.0%	
– Sthenic/high self-confident	41.3%	28.3%	
– Asthenic/low self-confident	34.5%	35.0%	
– Not classifiable	3.3%	6.7%	
Broken home-situation (before age of 16 years)	40.0%	31.7%	ns ^a
Married at onset			ns ^a
– All patients	100.0%	58.3%	0.000
– Only patients older than 25 years	100.0%	78.0%	ns
Heterosexual relationship before onset (> 6 months)			ns ^a
– all patients	100.0%	71.7%	0.001
– only patients older than 25 years	100.0%	92.7%	ns
Mental illness in the family	50.0%	61.7%	ns ^a
– Schizophrenic disorder	10.0%	11.7%	ns ^a
– Affective disorder	13.5%	31.7%	ns ^a
– Schizoaffective disorder	3.3%	3.3%	ns ^a
Season of birth			ns ^a
– Spring (March–May)	36.7%	26.7%	
– Summer (June–August)	16.7%	16.7%	
– Autumn (September–November)	23.3%	30.0%	
– Winter (December–February)	23.3%	26.7%	

Table 1 (continued)

	Female schizo-affective patients		<i>P</i>
	with onset in puer-perium (<i>n</i> = 30)	without onset in puer-perium (<i>n</i> = 60)	
Parents' social class (d)			ns ^a
– Upper classes	6.9%	6.7%	
– Middle middle class	24.1%	20.0%	
– Lower middle class	27.6%	30.0%	
– Upper lower class	34.5%	35.0%	
– Lower lower class	6.9%	8.3%	
Social class at onset (d)			ns ^a
– Upper classes	3.3%	5.0%	
– Middle middle class	26.7%	23.3%	
– Lower middle class	26.7%	30.0%	
– Upper lower class	43.3%	36.7%	
– Lower lower class	0	5.0%	

^a χ^2 -Test ^b *t*-test ns = not significant (= *P* > 0.05)

^c Educational level: lowest = uncompleted elementary school or special education for children with learning problems; low = completed elementary school or uncompleted intermediate school; middle = completed intermediate/vocational school or high school, not completed; high = completed high school or university study

^d Criteria of Kleining and Moore (1968), Moore and Kleining (1960), transferred to the categorisation of Hollingshead and Redlich (1959)

patients from the Cologne Study (Marneros et al. 1988–1991) whose illnesses had first manifested themselves at times other than the puerperium ("non-puerperal schizoaffectives"). Only female patients were included in order to achieve comparable groups.

Criteria and Definitions. All recorded episodes during the course were evaluated and defined according to slightly modified DSM-III criteria (the criteria for episodes have been published in detail elsewhere: Marneros et al. 1988a, 1991). In summary, a schizoaffective disorder was diagnosed if:

a) schizoaffective (schizomaniac, schizodepressive or schizomaniac-depressive mixed) episodes were present at least once during the course or

b) both schizophrenic and affective (manic, melancholic or manic-depressive mixed) episodes occurred, regardless of their number, sequence or relative frequency.

Instruments of Evaluation. Long-term outcome was evaluated on the basis of personal follow-up investigations. The exploratory framework used was the German translation of the Present State Examination (PSE, Wing et al. 1974, 1982). Furthermore, the outcome was assessed using the Global Assessment Scale (GAS). Developed by Spitzer et al. (1976; Endicott et al. 1976), the GAS is a rating scale for evaluation of the overall functioning of a subject during a specified period on a continuum from psychological or psychiatric illness to health.

We also employed the Disability Assessment Schedule (WHO/DAS), an instrument developed by the WHO (1988) for the assessment of social behaviour and disability during or after mental illness. We used the German version of the WHO/DAS, developed by the Central Institute of Mental Health in Mannheim (Schubart et al. 1986).

We selected the most representative and, at the same time, reliable factors to evaluate the social consequences of the illness

(Marneros et al. 1989b): (a) occupational mobility (only downward drift), (b) social mobility, (c) premature retirement, and (d) achievement of the expected social development. This last variable reflects the opinion of the interviewer as to whether the patient is fulfilling his or her expected social role and whether he or she was achieved the social status which would be expected on the basis of the status of the family, education, possibilities of upward social drift, and so on (Marneros et al. 1989).

In addition to the interview, all available case records on hospitalisations of the patients were analysed using a standardised protocol evaluating:

- general information,
- medical history,
- social factors,
- family history,
- life events,
- psychopathological symptoms,
- somatic findings,
- treatment, and
- gynaecological information.

The symptom list of this protocol was AMDP-oriented (AMDP 1981).

Table 2. Course parameters of schizoaffective disorders with and without onset during puerperium

	Female schizo-affective patients		<i>P</i>	
	<i>with</i> onset in puer- perium (<i>n</i> = 30)	<i>without</i> onset in puer- perium (<i>n</i> = 60)		
Duration of follow-up period (mean, years)	23.8	26.8	ns	^b
Minimum	13	10		
Maximum	40	61		
Onset of illness			0.000	^a
– Acute (> 1 month)	93.3%	45.0%		
– Subacute (1–6 months)	6.7%	35.0%		
– Chronic (> 6 months)	0	20.0%		
Type of course			ns	^a
– Monophasic (only 1 episode during course)	16.7%	10.0%		
– Oligophasic (2–3 episodes)	16.7%	30.0%		
– Polyphasic (4 or more episodes)	66.7%	60.0%		
Polarity			ns	^a
– Unipolar course	43.3%	55.0%		
– Bipolar course	56.7%	45.0%		
First episode of illness			0.018	^a
– Schizophrenic	33.3%	20.0%	ns	
– Schizodepressive	26.7%	55.0%	0.010	
– Schizomaniac	30.0%	6.7%	0.002	
– Schizomaniac-depressive mixed	3.3%	5.0%	ns	
– Melancholic	6.7%	5.0%	ns	
– Manic	0	5.0%	ns	
– Manic-depressive mixed	0	3.3%	ns	
Life events				
– Before first episode	100.0%	45.0%	0.000	^a
– During course	100.0%	78.3%	0.005	^a
Life events during course (only second or subsequent episode considered)	70.0%	60.0%	ns	^a

Table 2 (continued)

	Female schizo-affective patients		<i>P</i>	
	<i>with</i> onset in puer- perium (<i>n</i> = 30)	<i>without</i> onset in puer- perium (<i>n</i> = 60)		
Frequency of episodes			ns	^b
Geometric mean	4.05	4.79		
Median	4.47	5		
Standard deviation	2.29	2.17		
Minimum	1	1		
Maximum	15	18		
Frequency of cycles			ns	^b
Geometric mean	4.11	4.49		
Median	4.00	5.00		
Standard deviation	2.14	2.11		
Minimum	1	1		
Maximum	14	17		
Annual frequency of episodes (AFE) ^c	0.18	0.20	ns	^b
Annual frequency of cycles (AFC) ^d	0.27	0.30	ns	^b
Mean duration of episodes (months)	1.47	1.71	ns	^b
Mean duration of cycles (months)	29.3	28.0	ns	^b
Mean duration of intervals (months)	25.5	22.7	ns	^b
“Inactivity” of illness ^e (years)	12.9	14.4	ns	^b

^a χ^2 -Test ^b *t*-test ns = not significant (= *P* > 0.05)

^c Calculated by dividing the number of episodes by the duration of illness in years (Marneros et al. 1988a, b)

^d Defined as number of cycles divided by the activity period of illness in years, that is the time up to the last relapse-free period (Marneros et al. 1988a, b)

^e “Inactivity of illness” was defined as a period of at least 3 years since the end of the last episode, independent of the presence or absence of residual symptoms (Marneros et al. 1988c)

The SPSS software of the University of Bonn (Institute of Medical Statistics and Documentation) was used for the statistical evaluation.

Results

Premorbid and Sociodemographic Data

Table 1 shows the various premorbid and sociodemographic parameters that were investigated. As can be seen, few statistically significant differences were found between the two groups. The mean age at onset was found to be significantly lower in the group of schizoaffective patients with onset postpartum (25.2 years vs 31.4 years for the non-puerperal group). When only patients below the age of 40 years at onset (that means patients within their reproductive period) were compared no significant differences were found between the two groups.

Another statistically significant difference was found in the proportion of patients who were married, or had

Table 3. Outcome parameters of schizoaffective disorders with and without onset during puerperium

	Female schizo-affective patients		<i>P</i>	
	with onset in puerperium (<i>n</i> = 30)	without onset in puerperium (<i>n</i> = 60)		
Persistent alterations			0.048 ^a	
– Present	26.7%	48.3%		
– Not present	73.3%	51.7%		
Onset of persistent alterations (years after first manifestation)			ns	^b
Mean	6.5	8.5		
Median	2.0	7.0		
Standard deviation	8.7	8.3		
Minimum	0.0	0.0		
Maximum	22.0	30.0		
Age at onset of persistent alterations			ns	^b
Mean	31.4	39.4		
Median	29.5	39.0		
Standard deviation	10.1	11.9		
Minimum	19.0	24.0		
Maximum	50.0	69.0		
Global Assessment Scale (GAS)			ns	^a
– 91–100 (No difficulties)	73.3%	51.7%		
– 71–90 (Slight difficulties)	13.3%	15.0%		
– 51–70 (Moderate difficulties)	10.0%	16.7%		
– 31–50 (Severe difficulties)	3.3%	11.7%		
– 1–30 (Very severe difficulties)	0	5.0%		
Mean score	90.1	77.6	0.004 ^b	
Median	95.0	91.0		
Standard deviation	13.1	26.6		
Minimum	45.0	10.0		
Maximum	100.0	100.0		
Disability Assessment Schedule (WHO/DAS)			ns	^a
– Score 0 (Excellent adjustment)	73.3%	56.4%		
– Score 1 (Very good adjustment)	16.7%	20.0%		
– Score 2 (Good adjustment)	6.7%	15.0%		
– Score 3 (Fair adjustment)	3.3%	0		
– Score 4 (Poor adjustment)	0	8.3%		
– Score 5 (Very poor adjustment)	0	0		
Mean score	0.40	0.83	0.042 ^b	
Median	0.00	0.00		
Standard deviation	0.77	1.21		
Minimum	0.00	0.00		
Maximum	3.00	4.00		
Downwards occupational mobility ^c	(<i>n</i> = 10) 20.0%	(<i>n</i> = 32) 34.4%	ns	^a
Downward social mobility ^d	(<i>n</i> = 9) 22.2%	(<i>n</i> = 29) 20.7%	ns	^a
Premature retirement ^e	(<i>n</i> = 10) 20.0%	(<i>n</i> = 32) 34.4%	ns	^a
Non-achievement of the expected social development ^f	(<i>n</i> = 30) 6.7%	(<i>n</i> = 60) 28.3%	0.017 ^a	

Table 3 (continued)

	Female schizo-affective patients		<i>P</i>	
	with onset in puerperium (<i>n</i> = 30)	without onset in puerperium (<i>n</i> = 60)		
Living situation at the end of follow-up	(<i>n</i> = 30)	(<i>n</i> = 60)	0.032 ^a	
– Autark	96.7%	70.0%		
– Non-autark (because of mental illness)	3.3%	15.0%		
– Non-autark (age, somatic illness)	–	13.3%		
– Permanently hospitalised	–	1.7%		
Living situation at the end of follow-up (excluding patients non-autark because of non-psychiatric reasons):	(<i>n</i> = 30)	(<i>n</i> = 52)	0.042 ^a	
– Autark	96.7%	80.8%		
– Non-autark (including 1 permanently hospitalised patient)	3.3%	19.2%		

^a χ^2 -Test ^b *t*-test ns = not significant (= *P* > 0.05)

^c Calculated only for patients for whom downwards occupational drift was possible, i.e. housewives because of family reasons were excluded

^d Comparing the patient's original social class (parents' social class) with the patient's social class at the end of the observation time (criteria according to Kleining and Moore 1968). All patients excluded for whom social drift was impossible because their original social class was already the lowest, and patients who were housewives because of family reasons

^e Housewives excluded

^f Opinion of the interviewer as to whether the patient is fulfilling his or her expected social role and whether he or she has achieved the social status which would be expected on the basis of the status of the family, education, possibilities of upward social drift, etc. (Marneros et al. 1989)

a stable heterosexual relationship (> 6 months before onset): 100% – as could be expected – among the puerperal schizoaffective women vs 58.3% (married) and 71.7% (stable heterosexual relationship) in the non-puerperal schizoaffective women. Excluding patients younger than 25 years at onset (to avoid an effect of the different age at onset), the difference was no longer significant. All other premorbid and sociodemographic features – education, occupation at onset, social class, premorbid personality, broken home before the age of 16 years, frequency and type of mental illness in the family and season of birth – showed no significant differences.

Long-Term Course

The parameters of long-term course are presented in Table 2. Significant differences were found regarding the onset of illness. There was a higher frequency of acute onset in the puerperal group (93.3% vs 45.0%); however, this was an artifact which had to be expected due

to the inclusion criterion "onset within 6 weeks after childbirth". Thus, "long-lasting pre-episodic alterations" (prodromal symptoms"; Marneros et al. 1991) were not present in the puerperal group. All of the puerperal schizoaffective patients naturally had the event "childbirth" before their first episode of illness, while only 45.0% of the non-puerperal schizoaffective women had any life event before onset. Comparing the presence of life events only for the second and subsequent episodes, it was found that 70.0% of the puerperal schizoaffectives and 60.0% of the non-puerperal group had experienced life events at least once during the course, a difference without any statistical significance.

The first episode of illness was significantly more frequently a schizomanic one in the puerperal group (30.0% vs 6.7%), while by contrast, a schizodepressive first episode was found significantly less frequently in the puerperal schizoaffective group (26.7%) than in the non-puerperal group (55.0%). None of the puerperal schizoaffective disorders began with manic or manic-depressive mixed episodes. Although schizophrenic initial episodes were more frequent in the puerperal group (33.3% vs 18.8%), the difference showed no statistical significance.

No significant differences between the two groups were found regarding the other parameters, which concerned frequency of episodes and cycles, annual frequency of episodes and cycles, mean duration of episodes, intervals and cycles, or "inactivity" of illness (Table 2).

Long-Term Outcome

The long-term outcome, i.e. the psychopathological, psychological and social status of the patients at the time of follow-up investigation (on average 23.8 years for the puerperal and 26.8 for the non-puerperal group after onset of illness) was evaluated using standardised instruments (See Sect. "Material and Methods").

Only 26.7% of the puerperal vs 48.3% of the non-puerperal schizoaffective group showed persistent alterations in psychopathological, psychological or social domains at the time of follow-up, a difference with statistical significance on the 5%-level. The mean GAS score at the time of follow-up showed a significantly better outcome for the puerperal schizoaffective group (90.1 vs 77.6, Table 3) as did also the mean WHO/DAS score (0.40 vs 0.83, Table 3). Only two patients (6.7%) of the puerperal group did not achieve the expected social development (definition see Sect. "Material and Methods"), compared with 28.3% of the non-puerperal group, and only one (3.3%) of the puerperal patients lost the autarky because of the psychiatric illness against 15.0% of the non-puerperal patients plus one permanently hospitalised patient (totally 16.7%). Excluding the eight non-puerperal schizoaffective patients who lost their autarky for non-psychiatric reasons (e.g. living in an institution because of their age or because of a somatic illness), the difference was still significant (Table 3). No significant differences were found between the two groups regarding downwards

social mobility, downwards occupational mobility and premature retirement (Table 3).

Discussion and Conclusions

Regarding premorbid and sociodemographic data, the only differences found between the two groups of female schizoaffective patients (disorders with and without onset during puerperium) were (a) a younger mean age at onset and (b) a higher proportion of married patients or patients with stable heterosexual relationship before onset in the puerperal schizoaffective group; both are to be expected and sample-dependent. The age differences seem to be an effect of the inclusion criterion "delivery" in the puerperal schizoaffective group: this "biological" criterion causes a bias in favour of younger patients (maximum age in puerperal group 36 years, in non-puerperal group 58 years). When only patients below the age of 40 years at onset (patients in their reproductive period) were compared no significant differences were found between the two groups.

The difference in the proportion of patients who were married or had a stable heterosexual relationship (>6 months) before onset was also artificial: the minimum age of the non-puerperal schizoaffectives was 16 years, and no difference was found if only patients who were older than 25 years at onset were compared.

Much more interesting are the course and outcome parameters, because they are more independent of the selection criterion "childbirth". As has been shown, schizoaffective disorders are recurrent illnesses (Angst 1986; Marneros et al. 1986, 1988a, 1991). Comparing course parameters such as number of episodes and cycles, annual frequency of episodes and cycles, mean duration of episodes, intervals and cycles, and activity or inactivity of illness, no significant differences were found between the puerperal and non-puerperal schizoaffective women. The more acute onset of puerperal disorders is mainly sample-dependent, based on the exclusion of patients who showed psychiatric symptoms before childbirth and patients with onset of illness more than 6 weeks after childbirth in the puerperal group, as is also the significantly higher proportion of women with life events before first episode (by definition 100% in the puerperal group with life event "childbirth"). If only the second or subsequent episodes were compared no significant differences regarding the frequency of life events were found.

The only relevant difference between the two groups in the course of the illness concerned the first episode of illness: significantly more puerperal schizoaffective disorders began with a schizomanic episode (30.0% vs 6.7%) and fewer schizodepressive initial episodes were found in the puerperal schizoaffective group (26.7% vs 55.0%). The frequency of schizophrenic and melancholic initial episodes did not differ between the two groups. Manic or manic-depressive mixed initial episodes were not found within the puerperal group, but they were also not frequent in the non-puerperal group (5.0% resp. 3.3%). Thus, the finding of Brockington et al. (1981),

namely that schizomanic syndromes constitute a major proportion of postpartum psychoses, is confirmed by the present investigation.

The long-term outcome, i.e. the psychopathological, psychological, and social outcome, was significantly better for the puerperal group in most aspects. Puerperal schizoaffective disorders had in a lower percentage persistent alterations at the time of follow-up (26.7% vs 48.3%), had a higher mean GAS score at follow-up (90.1 vs 77.6), a lower WHO/DAS score (0.40 vs. 0.83), more frequently retained autarky at the end of the observation time (loss of autarky for psychiatric reasons: 3.3% of the puerperal patients vs 16.7% of the non-puerperal group, including one permanently hospitalised patient) and showed a lower frequency of non-achievement of the expected social development (6.7% vs 28.3%). The difference between the two groups concerning autarky at the end of the observation time remained significant also if patients were excluded who lost their autarky for non-psychiatric reasons (e.g. age, somatic illness). No significant differences were found regarding the remaining parameters of social outcome (occupational and social mobility, premature retirement), but it has to be considered that these variables were calculated only for a minor group of patients because of the definitions used (see Table 3).

It has been shown elsewhere (Marneros et al. 1991) that one of the factors that influences global functioning (according to GAS) in schizoaffective disorders, as well as the achievement of the expected social development, is the presence of life events before the initial episode of illness, so that the factor life event – which was present as “childbirth” by definition in the group of puerperal schizoaffective disorders – might be one possible explanation for the significant differences in long-term outcome between the two groups of schizoaffective disorders.

In conclusion, schizoaffective disorders with and without onset during the puerperium mainly showed similarities in premorbid and sociodemographic features and long-term course, and rarely differences. Most of the differences found (in age at first manifestation, marital state at onset, presence of stable heterosexual relationship before onset, type of onset, presence of life events) are closely connected with the inclusion and exclusion criteria applied for the puerperal disorders (exclusion of patients with pre-existing mental illness or psychiatric symptoms during pregnancy, inclusion only if onset was within 6 weeks of parturition).

Several significant differences were found regarding the long-term outcome (frequency of persistent alterations, level of global functioning and disability, non-achievement of the expected social development, loss of autarky), confirming earlier findings of other authors that puerperal disorders have a better outcome in general (Arentsen 1969; Davidson and Robertson 1986; McGorry and Connell 1990; Paffenbarger 1964; Protheroe 1969; Schöpf et al. 1984; Wilson et al. 1972). Nevertheless the explanation of this phenomenon seems to be connected with the inclusion criteria used, which excluded patients with chronic onset of illness (by definition) and included

only patients with life event before onset (also by definition). The latter factor was found to be closely connected with a better outcome in schizoaffective disorders (Marneros et al. 1991).

Another difference between the two groups concerned the first episode of illness: The puerperal schizoaffective disorders began more frequently with a schizomanic episode and less frequently with a schizodepressive episode than did the non-puerperal schizoaffective disorders, a finding confirming the findings of Brockington et al. (1981) and maybe reflecting the “pathoplastic” (Katona 1982; McNeil 1986) role of the event “childbirth” on psychotic disorders.

In summary, the present investigation showed that schizoaffective disorders with onset postpartum have a slightly better long-term outcome compared with other schizoaffective disorders, and that in regard to longer outcome, puerperal schizoaffective disorders have more similarities with affective disorders (Marneros et al. 1989–1991), supporting the assumption that schizoaffective disorders are closely connected with the affective disorders.

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