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ORIGINAL PAPER

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Features of acute and transient psychotic disorders

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Abstract *Background* Little is known about acute and transient psychotic disorders (ATPD), a diagnostic category introduced with ICD-10. *Aims* To determine the clinical and sociodemographic features, course and outcome of ICD-10 ATPD in a prospective and longitudinal study. *Method* We recruited all consecutive inpatients fulfilling the ICD-10 criteria of ATPD during a 5-year period. Demographic and clinical features were systematically evaluated and follow-up investigations were carried out at an average of 10 years after onset of the disorder using standardized instruments. *Results* ATPD patients represented 8.5 % of all inpatients with non-organic psychotic disorders. ATPD were characterized by female preponderance. In two-thirds of the cases a typical polymorphic symptomatology was found. In spite of the fact that the possibility of relapse within 5 years was high, the psychopathological and social outcome for most of the patients was very favourable. Schizophrenic episodes during follow-up were rare (7.7 % of patients), but a strictly monomorphous course (ATPD episodes only) from index episode to the end of the prospective follow-up was found in only 53.9 % of the patients. *Conclusion* ATPD are not a sharply demarcated and unchanging nosological entity. Nevertheless, the present data support a delineation of ATPD as a diagnostic category with specific clinical features and with a usually favourable prognosis. Further research on the topic is necessary.

Key words acute and transient psychotic disorders · psychopathology · course · outcome

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Introduction

The diagnostic category of "acute and transient psychotic disorders" (ATPD) as introduced by the ICD-10 (F23, WHO 1992) comprises psychotic disorders with acute onset, not fulfilling the criteria of schizophrenia. In creating this category, the authors of ICD-10 took account of a number of national concepts for such psychotic disorders, including cycloid psychosis in German psychiatry, bouffée délirante in French psychiatry, psychogenic or reactive psychosis in Scandinavian psychiatry, the remitting schizophrenia in American psychiatry, or the atypical psychosis in Japanese psychiatry (see contributions in Marneros and Tsuang 1986; Pillmann and Marneros 2003; Marneros and Pillmann 2003). Several subgroups are defined in ICD-10, including Acute Polymorphic Psychotic Disorder With/Without Symptoms of Schizophrenia, Acute Schizophrenia-like Psychotic Disorder and Predominantly Delusional ATPD. To date, little is known about the clinical features, course and outcome of the disorder. There have been only a few systematic clinical studies (Jørgensen et al. 1996, 1997; Sajith et al. 2002) and one genetic investigation (Das et al. 1999) on ICD-10 ATPD. Some other authors have conducted investigations into acute brief psychoses using different – often their own – diagnostic criteria (Susser et al. 1995, 1998; Varma et al. 1996). However, the fact is that the knowledge on ATPD is very limited (WHO 1992). We tried to enrich the data regarding ATPD by attempting to answer the following questions: 1) What are the major characteristics of ATPD patients? 2) What is the frequency of ATPD and its subgroups in an inpatient population? 3) How does the episode of ATPD evolve, and what are the prominent symptoms? 4) What is the course of the disorder during the years after the index episode? and 5) What is the outcome at the point of follow-up? The present investigation is part of the "Halle Study on Brief and Acute Psychoses" (HASBAP), a prospective longitudinal case control study of a cohort of inpatients with ATPD. A first follow-up investigation

was performed 2.2 years after the index episode. This report includes data from a second follow-up examination extending the follow-up period to 4.7 years.

Subjects and methods

Recruitment

In the first phase of the HASBAP, a prospective follow-up study, we identified all consecutive cases fulfilling ICD-10 criteria of ATPD (F23) treated as inpatients at the Department of Psychiatry and Psychotherapy at Martin Luther University Halle-Wittenberg, Germany, during a 5-year period. ICD-l0 research criteria were strictly applied. The recruitment procedure has been described previously (Pillmann et al. 2002; Marneros et al. 2002a). Briefly, patients with a clinical discharge diagnosis of ATPD were considered for inclusion in the study. All diagnoses were reviewed on the basis of a checklist incorporating ICD-10 research criteria. Consensus was reached on each patient. Only subjects in whom a diagnosis of ATPD was confirmed were included in the study.

To obtain reference values for sociobiographical data, a control group ("No mental disorder") was recruited from acute patients on a surgical ward who had no history of mental disorder. Only patients with acute surgical conditions, such as fractures or appendicitis, were included; they were matched for age and gender with the ATPD group. Patients with a history of mental disorder, including major affective disorder, psychosis and organic brain syndrome, were excluded. Psychosocial status was rated referring to the time preceding the current surgical problem.

We systematically recorded demographic, sociobiographical and clinical features, including a detailed family history. Information was gathered using a semi-structured interview, hospital records and, where available, information from family members or other suitable sources. For the evaluation of psychopathological parameters during the index episode, a symptom list derived from the AMDP system (AMDP 1995) was used, supplemented by items of specific interest in ATPD, such as "rapidly changing mood" and "rapidly changing delusions". Items were rated as "present" or "absent".

Follow-up

We performed follow-up examinations on all living and consenting patients. A first wave of follow-up investigations took part at 2.2 ± 1.3 years (mean ± SD) after the index episode, or 8.2 ± 8.3 years after the first episode. At the time of follow-up, 1 patient had died, 3 refused consent and the remaining 38 subjects were personally interviewed. The present report includes data from the second and, so far, final follow-up investigation. These examinations took place 4.8 ± 1.4 years (mean ± SD) after the index episode, or 10.2 ± 7.6 years after the first episode. At the time of the second follow-up, one of the patients had died in the interval from natural causes, one patient who had refused participation in the first follow-up interview consented to detailed questioning by telephone. The remaining 37 patients were personally interviewed. For relapse analysis, all patients were considered with the last follow-up investigation available, resulting in 39 subjects with sufficient data and with follow-up times of 4.7 ± 1.6 years (after the index episode), or 10.6 ± 7.9 years (after the first episode).

The instruments used were the WHO-SCAN (van Gülick-Bailer et al. 1995), WHO-DAS (Jung et al. 1989) and the Positive and Negative Syndrome Scale (Kay et al. 1989), all in their German translations, as well as a semi-structured interview for the evaluation of sociobiographical features already used in earlier studies. Present state ICD-10 diagnoses were assessed with the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (van Gülick-Bailer et al. 1995). All interviewers were extensively trained on the use of this instrument. Training on the WHO instrument SCAN had been carried out by WHO-approved trainers, and the first 10 interviews were supervised. Past episodes of illness with in- or outpatient treatment were also recorded. As an episode, we counted the occurrence of a major affective syndrome or of psychotic symptoms leading either to hospitalization or to outpatient treatment, including psychiatric medication and disrupting daily activities. ICD-10 diagnoses were assigned to all episodes during follow-up using all available information, including patients' reports and hospital records (best estimate diagnoses, Leckman et al. 1982).

The level of general functioning was assessed using the Global Assessment Scale GAS (Endicott et al. 1976). The GAS is a widely used rating scale for the evaluation of the overall functioning of a subject during a specified period on a continuum from severe psychiatric illness to health.

Social disability was measured using the German version of the WHO Disability Assessment Schedule (WHO-DAS, Jung et al. 1989). The DAS evaluates functioning in a variety of social roles by means of a structured interview. Global functioning, functioning in general behavioural domains and functioning in special roles (e. g. work, household, marriage) are measured on three separate scales ranging from 0 to 5, with higher scores designating a higher degree of handicap.

Psychopathological symptoms at follow-up were assessed with the Positive and Negative Syndrome Scale (PANSS) (Kay et al. 1989). The PANSS is an observer rating scale that assesses present state psychopathological symptoms in psychotic disorders using 30 items with 7-point severity scales. The 30 items of the PANSS comprise 7 items representing different aspects of the positive syndrome, 7 items representing different aspects of the negative syndrome and 16 items representing general psychopathology. Since its introduction, the PANSS has proved its reliability and validity in numerous studies, including clinical trials of pharmacological agents and clinical studies addressing issues of the nosology of psychotic disorders.

Interrater reliability

Interrater reliability estimates for the central outcome variables were calculated in our group. For this purpose, 15 interviews were double coded by two raters (interviewer-observer method). Kappa values for categorical items exceeded 0.80 for all items. For quantitative outcome scales, intraclass correlation coefficients were excellent, ranging from 0.86 (GAS) to 0.94 (DAS global score).

Data analysis

Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS), Version 9.0. For contingency tables of categorical data, the chi-square test or Fisher's exact test was used as appropriate. Bivariate comparisons of continuous data were performed with two-tailed t-tests. Significance was assumed at $p < 0.05$.

All subjects provided written informed consent. The study protocol was approved by the local ethics committee.

Results

Frequency of ATPD

Forty-two patients fulfilled the ICD-10 criteria of ATPD during the recruitment period. This amounts to 4.1 % of all non-organic psychotic and affective disorders (ICD-10, Chapter F2, F3), or 8.5 % of all non-organic psychotic disorders (i. e. disorders fulfilling the criteria of Chapter F2, ICD-10) (Fig. 1).

Subgroups and clinical features

Most of the patients were included with their first episode, but 19 (45.2 %) of the patients had previous

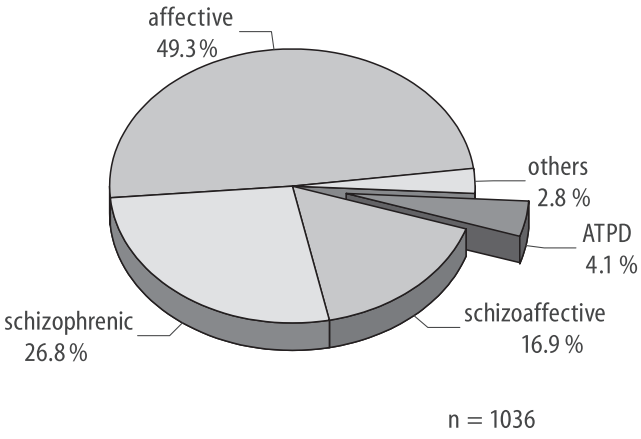

Fig. 1 Proportion of acute and transient psychotic disorders (ATPD) in all non-organic psychotic and non-organic major affective episodes at Martin Luther University from 1993 to 1997

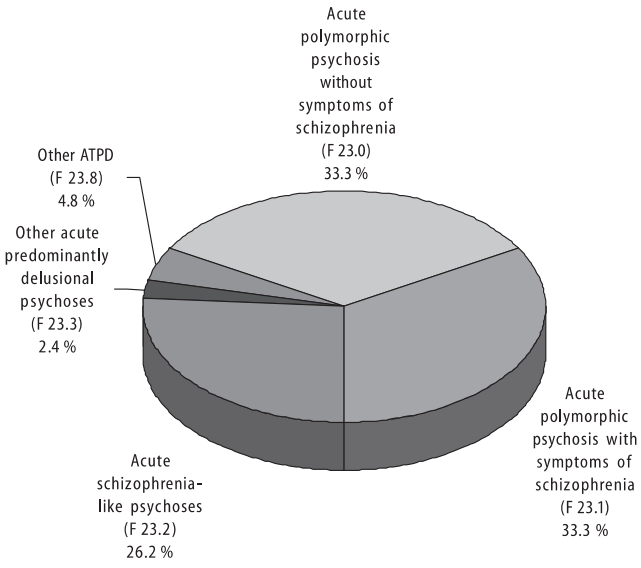

Fig. 2 Subtypes of index episode according to ICD-10

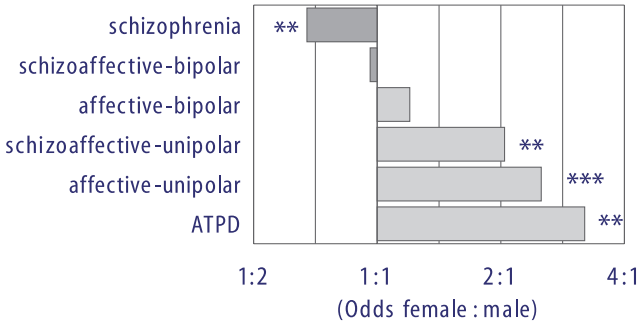

Fig. 3 Gender distribution in non-organic psychotic and non-organic major affective disorders. Significance of deviation from equal distribution: **p < 0.01, ***p < 0.001

episodes, the maximum being 16. The number of previous episodes was 1.57 ± 3.01 (mean ± standard deviation). Onset of the disorder (first episode) was not restricted to any specific age group, but varied between 18 and 70 years. The mean age at onset was 35.8 ± 11.1 years, the mean age at index admission was 41.2 ± 12.5 years (range 18–73 years). Retrospective assessment of earlier episodes with operational criteria was hampered by variable, poor and sometimes absent documentation. A preliminary classification of these episodes according to ICD-10 showed ATPD episodes to be most frequent (47 %), followed by affective (24.2 %) and schizoaffective (15.2 %) episodes. Patients were included in the present study according to the diagnosis of the index episode – consistent with ICD-10 diagnostic criteria for ATPD, we did not exclude patients with earlier episodes other than ATPD from the study.

Subtyping of the index episode according to ICD-10 categories showed that both polymorphic and schizophrenic symptoms were frequent: 66 % of the subjects belonged to the categories of acute polymorphic psychotic disorder (F23.0 & F23.1) and 59.5 % showed schizophrenic symptoms (F23.1 & F23.2) (Fig. 2). Abrupt onset, defined as transition from a non-psychotic to a psychotic state within 48 hours, was frequent (42.9 %). In contrast, associated acute stress was rarely found (9.5 %). For a coding of associated acute stress, ICD-10 requires the first psychotic symptoms to occur within about 2 weeks of one or more events that would be regarded as stressful to most people.

Gender distribution

The great majority (78.6 %) of patients diagnosed as having an ATPD were females. This corresponds to a female:male ratio of 3.7:1. Female preponderance is particularly striking when compared to gender distribution in the other diagnostic groups. In comparison, Fig. 3 gives the gender distribution for all patients treated as inpatients at the same institution during the period from 1993 to 1997 for non-organic psychotic disorders or non-organic major affective disorders. Although an inpatient population may show selection bias and is not identical with the whole population suffering from a psychotic disorder, the gender distributions found are very similar to gender ratios reported in epidemiological studies (Leung and Chue 2000).

Relevant sociobiographical data

Significant differences in the sociobiographical data between the ATPD group and the controls without mental disorder are shown in Table 1. There were no significant differences between ATPD and controls in season of birth, educational level and the proportions of subjects that had never married or never had a stable heterosexual relationship (stable being defined as lasting longer than 6 months).

A broken home situation was found significantly

Table 1 Relevant sociobiographical data on ATPD patients and controls without major mental disorder

	ATPD (N = 42)		Controls without mental disorder (N = 42)		p
	n	%	N	%	
"Broken home" situation	19	45.2	9	21.4	0.018[1]
Mental illness in first-degree relative (any disorder)	15	35.7	4	9.5	0.004[2]
Mental illness in first-degree relative (only psychotic or major affective disorders)	6	14.3	1	2.4	0.055[3]

[1] $chi^2 = 5.36$, d. f. = 1; [2] $chi^2 = 8.230$, d. f. = 1; [3] Fisher's exact test

more often in ATPD than in healthy controls. A "broken home" situation was defined as a disruption in the continuity of caregiving in the patient's family before the age of 15 (when one of the following criteria was met: death of one or both parents, divorce or separation of parents, caregivers other than parents, severe addiction of one or both parents) (Marneros et al. 1991).

For all subjects we have obtained a detailed family history. The data did not allow differentiation between different psychotic and major affective disorders, but we tried to differentiate psychotic and major affective disorders from other mental disorders (e. g. alcohol dependency). There was a consistent difference between ATPD and controls in the rate of subjects with a positive family history. This difference was highly significant for all mental disorders but was only a trend for psychotic and major affective disorders, probably due to the small numbers. The relationships were similar when the numbers of affected first-degree relatives were considered relative to the total number of first-degree relatives (corrected according to the method of Weinberg). The proportion of first-degree relatives with any mental disorder was 20.3 % for the ATPD group and 3.6 % for controls without mental disorder ($P < 0.001$). The proportion of first-degree relatives with psychotic disorders was 3.4 % for the ATPD group and 0.7 % for controls without mental disorder (n. s.).

Symptoms in the index episode and their development

During the index episode, all patients showed psychotic symptoms (e. g. delusions or hallucinations) (Table 2). Disturbances of affectivity were also found in all patients, with depressed mood, euphoria and anxiety all being present in most of the patients at some point in time. First-rank symptoms were frequent, found in 71 % of cases. We looked for the symptoms typically associated with a "polymorphic" picture: rapidly changing mood, rapidly changing symptoms and bipolarity of symptoms. As Table 2 shows, not only does quickly changing mood seem to be characteristic of an ATPD episode, but also quickly changing topics of delusions, which are very unstable. Bipolarity (i. e. change between hyperthymic and depressed mood) was found in 29 % of patients.

Table 2 Symptomatology of the index episode (n = 42)

	n	%
Psychotic symptoms	42	100.0
Affective disturbance	42	100.0
Delusions	41	97.6
Disturbance of drive and psychomotor disturbances	36	85.7
Thought disorder	36	85.7
Hallucinations	32	76.2
Euphoria	32	76.2
Anxiety	32	76.2
Depressed mood	31	73.8
First-rank symptoms of schizophrenia	30	71.4
Rapidly changing mood	29	69.0
Bizarre delusions	21	50.0
Rapidly changing delusions	20	47.6
Bipolarity of symptoms	12	28.6

As Table 3 shows, the development of the full symptomatology is very quick. The time between the first manifestation of the psychotic symptoms to the full-blown symptomatology is approximately 3 days. The ICD-10 definition of ATPD explicitly allows for non-psychotic prodromal symptoms of more than 2 weeks duration. In the present sample, such non-psychotic prodromal symptoms were present in some patients, but their duration was quite limited in most patients, with a median of 3 days. The duration of psychotic symptoms was very short. In 3 patients, we found a du-

Table 3 Development of symptoms in the index episode (n = 42)

Time from first prodromal symptom to first psychotic symptom in days	
Mean	17.0
Standard deviation	31.1
Median	3.0
Range	0–133
Time from first psychotic symptom to full symptomatic picture in days	
Mean	3.9
Standard deviation	3.9
Median	3.0
Range	0–14
Duration of psychotic symptoms in days	
Mean	17.5
Standard deviation	13.3
Median	12.5
Range	1–61
Duration of inpatient treatment in days	
Mean	33.7
Standard deviation	24.0
Median	27.0
Range	5–94

ration of only 1 day; the median duration was 13 days. It must be stated, however, that nearly all patients received antipsychotic medication. The mean duration of inpatient treatment was approximately 1 month, but was usually shorter. Some patients had to stay longer in hospital because of social factors estimated to be a risk for relapse.

Course

During a mean follow-up observation time of 4.7 years, three quarters of the patients had at least one relapse and the mean frequency of episodes per year follow-up was 0.37 (see Table 4). A Kaplan-Meyer analysis preformed because of the varying length of follow-up showed that the mean time from index episode to relapse was 2.3 years (95 % confidence interval, 1.5–3.1 years) (Marneros and Pillmann 2003).

From the available information we classified the recurrent episodes according to ICD-10 criteria (Fig. 4). If information (e. g. on speed of onset) was incomplete, best estimate diagnoses were used. Thus, the category of ATPD contains both certain and probable cases. The vast majority of the patients who relapsed had another ATPD episode. Thirty per cent of the patients had one or more affective episodes, four patients (10.3 %) had schizoaffective episodes and three patients (7.7 %) had schizophrenic episodes during follow-up. These data can be used to estimate diagnostic stability of ATPD. If a rather soft criterion of diagnostic stability is used (diagnostic criteria of schizophrenia not fulfilled during follow-up) all but three patients with an index diagnosis of ATPD remained diagnostically stable (i. e. 92.3 % of all patients with follow-up data). If a strict criterion of diagnostic stability was used (no episode other than ATPD during follow-up), 53.9 % (n = 21) of the patients with an index diagnosis of ATPD remained diagnostically stable.

Table 4 Course of the disorder from index episode to the last follow-up examination (duration 4.6 ± 1.6, n = 39)

Patients with relapse (n, %)	30 (76.9 %)
Number of relapses (mean ± SD)	1.6 ± 1.4
Number of relapses (range)	0–5
Annual frequency of episodes (mean ± SD)	0.37 ± 0.32

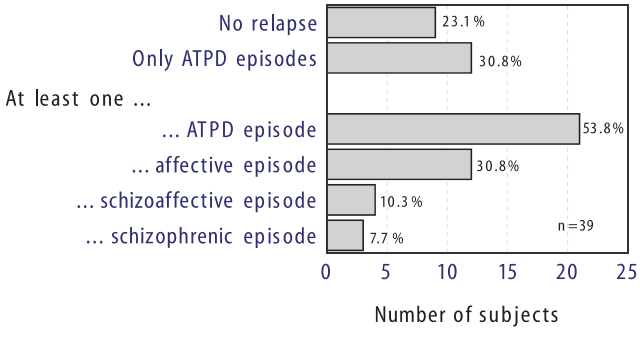

Fig. 4 Types of relapse from index episode to the last follow-up investigation

Outcome

The outcome of ATPD, after a duration of the illness of more than 10 years, could be characterized as very favourable (Table 5). After observing the patients over a long period of time, the average score in GAS was found to be more than 81. A less than good level of functioning was found in only 18.5 % of patients, more severe impairment of functioning in only 5.2 %. This was also reflected in social disability with a mean DAS score of 0.58 on a scale from 0–5, with lower values indicating better functioning. Low values on the Positive and Negative Syndrome Scale were found on both the positive and negative subscales, indicating an absence of residual symptoms in most patients.

Discussion

When the category of ATPD was introduced in the 10th edition of ICD, the authors of ICD-10 pointed out that the knowledge regarding ATPD is very limited. Few studies on ATPD have been published since (Jørgensen et al. 1996, 1997; Marneros et al. 2000, 2002a, 2003; Pillmann et al. 2001; Sajith et al. 2002; Marneros and Pillmann 2003). The low frequency of the disorder, especially in industrialized countries, makes it difficult to recruit large numbers of patients. This limitation also applies to the present investigation. However, it is a

Table 5 Outcome at the end of the prospective follow-up (n = 38)

	n (%)/mean ± SD
Global Assessment Scale (GAS)	
Mean score	81.7 ± 15.3
Level of functioning	
Good (71–100)	31 (81.5)
Medium (51–70)	5 (13.2)
Severely impaired (31–50)	1 (2.6)
Most severely impaired (< 30)	1 (2.6)
Disability Assessment Schedule – Global score	
Mean score	0.58 ± 1.00
Good social functioning (Score 0)	25 (65.8)
Sufficient social functioning (Score 1)	8 (21.1)
Moderate social functioning (Score 2)	2 (5.3)
Low social functioning (Score 3)	2 (5.3)
Bad social functioning (Score 4)	1 (2.6)
Absent social functioning (Score 5)	0
Positive and Negative Syndrome Scale[1]	
PANSS Positive Subscore	8.1 ± 3.2
PANSS Negative Subscore	10.5 ± 6.2
PANSS General Subscore	19.5 ± 6.3
PANSS Total Score	38.1 ± 14.0

[1] Possible scores range from 7–49 for positive and negative subscale, from 16 to 112 on the general subscale and from 30 to 210 on the total scale, higher score indicating more symptoms

strength of this study that we prospectively studied an unselected clinical inpatient sample containing all 42 patients who were consecutively treated at Halle University Hospital for an episode of ATPD during a 5-year period. We chose to include patients with previous episodes in order to recruit a sample representing all stages of the illness, resulting in variable follow-up times. Previous analyses of the sample did not show substantial differences between patients with and without previous episodes (Marneros and Pillmann 2003; Marneros et al. 2003).

The hospital serves a large municipal and suburban catchment area with a nonselective admission policy. We therefore conclude that the present sample can be regarded as representative for a clinical inpatient population with ATPD. This allows a reasonable estimate of the frequency of ATPD, which amounts to 4.1 % of all inpatients with non-organic psychotic or non-organic major affective episodes (F2, F3 ICD-10), or 8.5 % of all non-organic psychotic disorders (F2 ICD-10). This is lower than the frequency reported in some studies for broader concepts such as cycloid psychoses not using ICD-10 criteria, which has been estimated to amount to 10–20 % of clinical samples with psychotic disorders (Perris 1986; Lindvall et al. 1993; Leonhard 1995). The main reason for the apparently low frequency of ATPD is the strict exclusion of patients with major affective episodes and of all patients displaying schizophrenic symptoms for more than a month in the lCD-10 definition of ATPD. The frequency of ATPD in the present sample is similar to the 3 % frequency of "acute brief psychoses" in a study that used strict criteria of acute onset and of remission in a first-admission sample of patients with affective and nonaffective psychoses (Susser et al. 1995), and it seems to be higher than the frequency of brief psychotic disorder as defined by DSM-IV (Schwartz et al. 2000; Pillmann et al. 2001).

There was a marked preponderance of females in the present sample, with a female to male ratio of 3.7:1, exceeding the gender ratio in all other groups of psychotic and affective disorders treated during the same period. This overrepresentation of female patients is in accordance with the findings of other studies on brief psychotic episodes with a favourable prognosis (Ring et al. 1991; Susser et al. 1995). It provides evidence for the validity of a delineation of ATPD from schizophrenia, which is equally prevalent in both genders (Leung and Chue 2000). On the other hand, ATPD patients were very similar to a control group without mental disorder in terms of educational achievement with regard to relevant social parameters. These findings indicate that premorbid adjustment in ATPD is quite good.

However, there are two relevant differences from the mentally healthy controls. Firstly, ATPD patients had significantly more often suffered a "broken home" by their 15th year of life, usually a disruption of caregiving. A broken home situation seems to be an unspecific factor and has been reported not only in psychiatric disorders but is also frequent in populations of offenders (Marneros et al. 2002b). Discontinuity of caregiving in the form of parental loss has been highlighted as an important risk factor for psychiatric conditions, such as major depression, bipolar disorder and schizophrenia (Agid et al. 1999). Secondly, family history data obtained from the probands have shown elevated rates of psychotic and non-psychotic psychiatric disorders in first-degree relatives of ATPD patients. Although limitations of the family data of this study preclude far-reaching conclusions, the results are in concordance with those of the family study on ATPD of Das et al. (1999) insofar as they support the notion that a hereditary factor plays an important role in ATPD.

The evolution of illness was swift in the majority of the present sample. Although in some cases non-specific symptoms had been present before the onset of psychotic symptoms, with a median of 3 days, the duration of such prodromes was usually very short. Only rarely non-psychotic prodromal symptoms were identified for a longer period (up to 133 days before the onset of the psychotic period). The diagnostic guidelines explicitly allow for such unspecific prodromes (WHO 1992; 1993) and in the present investigation there is no evidence that the patients involved should be separated from the main group. It has to be noted, however, that the retrospective assessment of unspecific prodromal symptoms and of their relationship with the acute episode is associated with considerable uncertainties. Once psychotic symptoms were present, the full syndrome quickly evolved so that 43 % of the subjects fulfilled the ICD-10-criterion of "abrupt onset" of psychotic symptoms (< 48 hours). Similarly, the duration of psychotic symptoms, which by definition might have been up to 3 months, was usually very short, with a median of 13 days. Thus, the present study gives no support to recent suggestions that the time criterion for ATPD should be extended to 6 months (Mojtabai et al. 2000; Susser et al. 1996).

A severe acute stressor precipitating the acute episode was only found in 9.5 % of the sample. The low number is in accordance with 11 % severe stressors found by Jørgensen et al. (1996) in their sample of patients with ATPD. It reflects the narrow definition of severe preceding stress in ICD-10 requiring both a close temporal relation of the event with the onset of psychosis and a highly stressful nature of the event.

There is evidence in the present study that polymorphous symptomatology is indeed a characteristic feature for the majority of ATPD, as suggested by clinical tradition: two-thirds of the patients belonged to the subcategories named "acute polymorphic psychoses". This number corresponds well to the findings of Jørgensen et al. (1996), 69 % of whose sample were of the polymorphic subtypes. Moreover, in the present study, analysis of symptoms displayed during the index episode showed that among the "polymorphic symptoms", rapidly changing mood was most frequent, followed by rapidly changing delusions and, with the lowest frequency, bipolarity of symptoms.

During the follow-up period of 4.7 ± 1.6 years, three quarters of the patients had a relapse. Two patients met the criteria of ICD-10 schizophrenia, and there were several schizoaffective episodes. Diagnostic change to schizophrenia was rare (7.7 %), but a strictly monomorphous course (ATPD episodes only) was only seen in 53.9 % of the patients. These data confirm ATPD to be a disorder with frequent relapse, but they indicate a somewhat better longitudinal delineation from schizophrenia than suggested by the study of Jørgensen et al. (1997), who found a diagnostic shift in half of the patients with ATPD (48 %) at one-year follow-up – most often to schizophrenia (15 %) or affective disorder (28 %).

The present data can further be compared to the results of Sajith et al. (2002) who followed an Indian sample of 45 patients with ATPD (acute polymorphic type, ICD-10 F23.0 and F23.1) over three years. After 3 years, 24 patients (53 %) remained without relapse. Nine patients (20 %) retained a diagnosis of ATPD, the others were re-diagnosed as bipolar affective disorder or unspecified non-organic psychosis. Thus, the main difference is that relapses were less frequent in the patients of Sajith et al. (2002). One possible explanation for this may be population differences. Brief and acute psychoses are known to be more frequent in developing, than in industrialized countries and may also carry a more favourable prognosis (Susser and Wanderling 1994, 1998).

Although the frequency of relapse within nearly 5 years was high in the present sample, the psychopathological and social outcome of the patients was very favourable. For the majority of patients, ratings on outcome measures such as the Disability Assessment Schedule and the Positive and Negative Syndrome Scales were low, indicating minimal dysfunction and thus validating the general concept of ATPD as a benign disorder. With a mean score of 81.7 on the GAS, global functioning in the present sample was somewhat superior to that of the ATPD sample of Jørgensen et al. (1997), who reported a mean GAS score of 70.

Conclusion

In the present study ATPD emerged as a psychotic disorder mainly found in females, with first manifestation between the 18th and the 70th year of life. Although the diagnostic criteria allow a development of psychotic symptoms over 14 days and a duration of up to 3 months, in most cases the time course of the disorder is much more rapid. In two-thirds of the cases, the typical polymorphic syndrome is found. In spite of the fact that the possibility of relapse within 5 years is high, the psychopathological and social outcome of the patients is very favourable. Since there is a considerable degree of diagnostic instability during long-term course, the notion of ATPD as a "pure" or "monomorphic" nosological entity is not supported by the present study. Nevertheless, the particular features reported above speak for the delineation of ATPD as a diagnostic category for clinical and research purposes. In separate papers we provide further support for the category of ATPD by showing relevant differences between ATPD, schizophrenia and schizoaffective disorders (Marneros et al. 2002a, 2003).

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