Cycloid Psychoses: Clinical Symptomatology, Prognosis, and Heredity[1]

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Abstract:

The development of the concept of cycloid psychoses goes back to the problem of "atypical psychoses" which arose from Kraepelin's dichotomy of endogenous psychoses[1]. It concerned those forms of psychoses which could be assigned neither to dementia praecox nor to manic-depressive illness. One strategy for a solution of this problem was the broadening of the concept of schizophrenia as inaugurated by Bleuler (1911)[2]. Schizophrenia was then thought to include lots of clinical conditions with entirely different cross-sectional symptomatology, long-term course and outcome, thus considerably reducing the heuristic value of the diagnosis. Furthermore, reliable prognoses became impossible according to Bleuler's concepts (table 1).

Inevitably, the idea was generated that there might be a nosologically independent group of endogenous psychoses in addition to schizophrenias and manic-depressive illness. Based upon the previous work of Wernicke and Kleist[3], Leonhard (1999)[4] further established the concept of cycloid psychoses. Rejecting nosological hybridisation, the independency of these psychoses was emphasized. Representing one of the three main groups in his subdivision of psychoses with "schizophreniform" symptomatology, Leonhard meticulously elaborated on precise clinical diagnostic criteria for cycloid psychoses.

In the current diagnostic manuals, those psychoses spread over various diagnostic entities like bipolar affective disorder, schizoaffective disorder, acute polymorphic psychotic disorder (ICD), brief psychotic disorder (DSM), or even schizophrenia, if 1st-rank symptoms are observed for more than one month.

Keywords: Cycloid Psychosis; Leonhard Nosology; Outcome; Quality of Life; Family Study.

	favourable prognosis			***unfavourable prognosis***	
Kraepelin	maniac depressive insanity			dementia praecox	
Bleuler	manic depressive insanity	group of schizophreniaas			
DSM	**affective disoders**		**schizoaffective disorders**	**schizophrenia**	
Leonhard	**monopolar** affective psychoses	**manic** depressive illness	**cycloid** psychoses	**unsystematic** schizophrenias	**systematic** schizophrenias

Table 1: The nosological position of the cycloid psychoses.

CLINICAL FEATURES OF CYCLOID PSYCHOSES

Cycloid psychoses generally present with bipolar, polymorphous clinical symptomatology. They run a phasic course with complete remissions after each episode. Thus, patients do not develop residual states in a strict sense. In table 2, the symptoms of the three characteristic subforms are displayed: anxiety-happiness psychosis, excited-inhibited confusion psychosis, and hyperkinetic-akinetic motility psychosis.

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Hyperkinetic-Akinetic Motility Psychosis	Excited-Inhibited Confusion Psychosis	Anxiety-Happiness Psychosis
hyperkinesia increase in expressive and reactive motions, severe distractibility by environmental conditions with continued senseless motor activity	**excitation of thought** incoherence of thought with compulsive speech or incoherence of thematic choice	**happiness** ecstatic mood with ideas of calling, happiness , reflecting an altruistic component of the ecstasy
hypokinesia / akinesia disappearing of reactive motions, stiffness of expressive motions, reduction or standstill of voluntary movements	**Inhibition of thought** inhibition of thought, perplexedness ideas of meaning, ideas of reference acustic, visual or somatopsychic hallucinations	**anxiety** severe anxiety with distrust and ideas of reference, ideas of threat or persecution, anxiously coloured somatic sensations
general symptoms incoherent speech, unarticulated sounds of expressive character or mutism	**general symptoms** fleeting misrecognitions of persons ideas of reference, fleeting hallucinations	**general symptoms** affect-generated illusory or hallucinatory phenomena
mood alterations from anxious to ecstatic; hallucinations	lability of affect with rapid changes between joy and tearfulness	rapid changes of anxiety and ecstatic mood

Table 2 - The clinical features of cycloid psychoses.

One very characteristic idea often told in anxiety-happiness psychoses should be mentioned here, because it shows the amalgamation of the two opposite emotional states: the idea of self-sacrifice originated in the anxious mood can combine with idea to save the world, an altruistic idea typical for the happiness pole. This may result in the fleeting delusion to be Jesus Christ.

OUTCOME AND PROGNOSIS OF CYCLOID PSYCHOSIS

In a prospective study, Beckmann and colleagues (1990)[5] re-evaluated 26 of 31 patients with cycloid psychoses after four years. After that time, all had experienced phases with clear features of cycloid psychoses without any shift to another diagnostic entity.

Albeit, in six cases, there was an overlap between two subforms. Nevertheless, this study exemplifies high diagnostic stability of cycloid psychoses. All probands failed to develop residual symptoms and all scored very high on the Srauss-Carpenter-Outcome-Scale (13.9 - 14.2 out of max. 16 points).

Following a retrospective design, but with trained co-workers blind to the diagnosis, Jabs et al. (2004)[6] compared 33 cycloid psychotic and 44 schizophrenic patients during non-acute intervals in terms of course, medication after a mean duration of illness of 13.2 years. Mental and social functioning as well as quality of life was measured in these patients, as well as in 48 healthy controls who were age- and sex-matched nurses of our clinic, their relatives and friends. The prinicipal results are displayed in table 3. Briefly summarized, first symptoms occurred in cycloid psychotic patients significantly later than in schizophrenics; they spent less time in hospital over the course of illness and needed lower doses of neuroleptics. In contrast, they were more often treated with mood stabilizers than schizophrenic patients. In terms of outcome, they exceeded the schizophrenics in most realms of life and in all scales measuring mental and social funcioning. And in quality of life measured by the German version of the Lancashire Quality of life profile, the global score as well as the mean scores of all rated different domains did not differ significantly between cycloid psychotic patients and healthy controls, but between these both groups and schizophrenic patients (for details see figure 1).

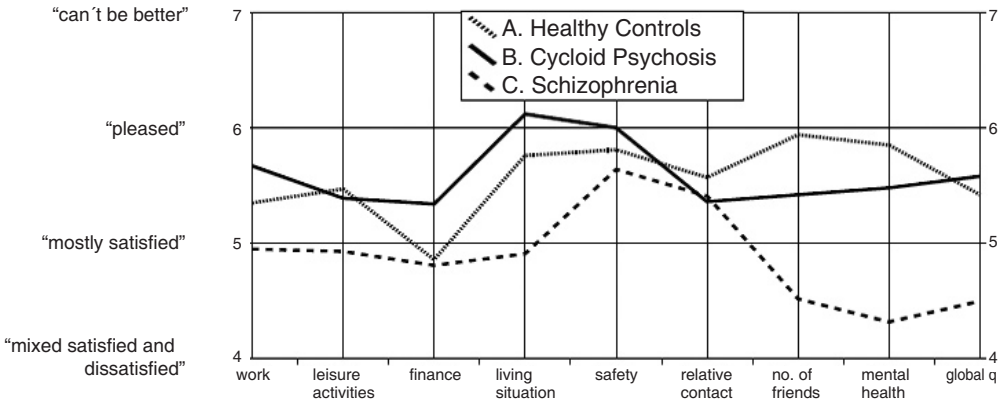

Figure 1 - Subjective quality of life in cycloid psychosis, schizophrenia, and healthy controls.

	cycloid psychoses (n=33)	schizophrenics (n=44)	statistic values
Course of the illness			
age/ years (±SD) at time of			
- first symptoms	28.1 (7.8)	22.7 (10.0)	p=0.009 T=-2.68
- first psychiatric attendance	28.5 (10.0)	24.1 (7.7)	p=0.32 T=-2.19
- first hospitalisation	29.2 (9.6)	25.6 (8.3)	p=0.08 T=-1.78
time			
- since first hospitalisation/ years (±SD)	11.8 (8.5)	14.3 (9.4)	p=0.23 T=1.20
- since last hospitalisation/ years (±SD)	3.2 (1.6)	2.7 (1.4)	p=0.1 T= -1.67
number of hospitalisations n (±SD)	4.5 (3.5)	7.8 (7.1)	p=0.01 U=478
life-time hospitalisations/ wks (±SD)	34.2 (31)	62.2 (43.9)	p=0.001* U=385
Current medication			
Neuroleptic medication n (%)	27 (81.1)	42 (95.5)	p=0.052 chi²=3.77
CPEq1 (mgs, ±SD)	103 (91)	316 (285)	p=0.0001* U=352
Mood stabilizer (%) 2	20 (60.6)	6 (13.6)	p<0.0001*
Assessment scales			
CGI3 (±SD)	2.2 (0.56)	4.6 (1.6)	p<0.0001* U=162
GAF4 (±SD)	88.4 (8.1)	58.8 (20.5)	p<0.0001* U=147.5
SCS5 (±SD)	14.9 (2.0)	9.5 (4.3)	p<0.0001* U=171
PANSS6 (SD)	31.9 (2.6)	57.0 (18.1)	p<0.0001* U=93

1 CPEq=chlorpromazine equivalents

2 non-neuroleptic prophylactic medication (lithium, carbamazepine, valproate acid)

3 Clinical Global Impression Scale

4 Global assessment of Funcion Scale

5 Strauss-Carpenter Outcome Scale

6 Positive and Negative Syndrome Scale * p<0.0012

Table 3 - Comparison of data on clinical course, medication and rating scales in cycloid psychotic and schizophrenic patients.

GENETIC STUDIES ON CYCLOID PSYCHOSES

In a twin study by Franzek and Beckmann (1998)[7] with 26 index probands out of 22 twin pairs, concordance rates of dizygote and monozygote twins, diagnosed cycloid psychotic according to Leonhard, were compared. In both the pairwise and probandwise aproach, there were only slight differences concerning concordance, resulting in a MZ/ DZ-ratio of 1.25 and in a low heredity-index of 0.21. So one can estimate that the variance caused by environmental factors equals about four times the variance caused by genetic factors in cycloid psychoses.

In the same study above, Franzek & Beckmann applied also the family study approach. In the first degree relatives of cycloid psychotic patients, they found rates of about 7% for affective psychoses and about 4% for other psychiatric disorders in parents and siblings. This indicates again a comparatively low heredity of cycloid psychoses.

In another, larger controlled family study by Pfuhlmann et al. (2004)[8], the aim was to delineate cycloid psychosis (CP) from manic-depressive illness (MD), using Leonhard's criteria for both entities. Leonhard's criteria for manic-depressive illness include not only patients with the history of (hypo) mania, but also with subtle signs of the opposite pole like agitation or talkativeness in depression, today referred to as "mixed states" or atypical depression.

According to the sample-of-convenience method, we asked all patients diagnosed CP or MD in a three-years period. Controls (CTR) were recruited randomly with the help of the registration office, matched for age and gender, without any reward. We aimed at a personal examination of all 383 living and traceable 1st-degree relatives by experienced psychiatrists using a semistructured interview. In more than 92%, we succeeded to do so. In the cases of deceased and not traceable relatives we applied the family history method. Data on the subjects studied are displayed in table 4.

	Cycloid Psychosis (n=45)	MDI* (n=32)	Controls (n=27)
N relatives >18 years of age	172	153	106
N living relatives	157	133	93
mean age (years)	48.5	47,2	50,0
N personally examined relatives	146	123	84
mean age (years)	48.8	47.4	49.9

* MDI: Manic-depressive illness

Table 4 - Subjects studied in a controlled family study comparing morbidity risks in relatives of cycloid psychotic patients, manic depressive patients, and healthy controls.

To estimate the age-corrected familial morbidity risk in all three groups, we applied Kaplan-Meier's life table analysis. The log-rank test revealed a significant higher risk for 1st-degree relatives of MD-patients compared to CP patients to suffer from any endogenous psychosis (figure 2) or from MD (figure 3). In the latter group, there was no significant difference in the morbidity risk compared to relatives of the CTR-group. The morbidity risk for CP in all 1st-degree relatives, however, was very low with no significant differences between the MD and CP group (figure 4).

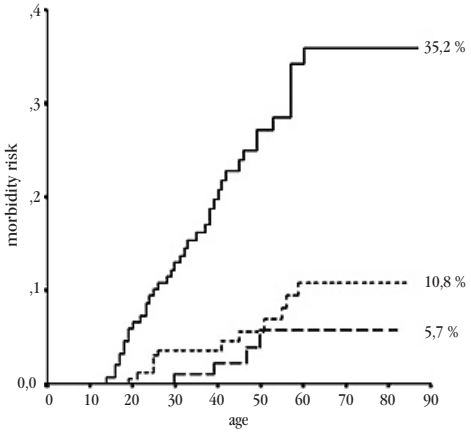

Figure 3 - Morbidity risk for manic-depressive psychoses in first-degree relatives.

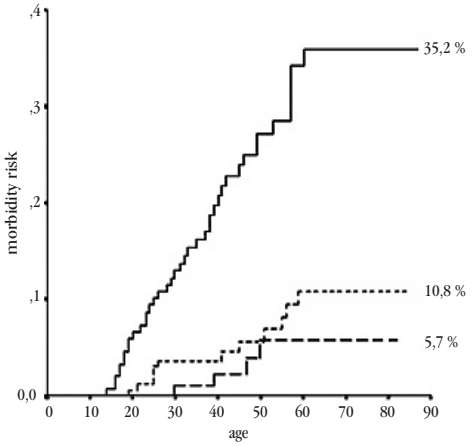

Figure 2 - Morbidity risk for endogenous psychoses in first-degree relatives.

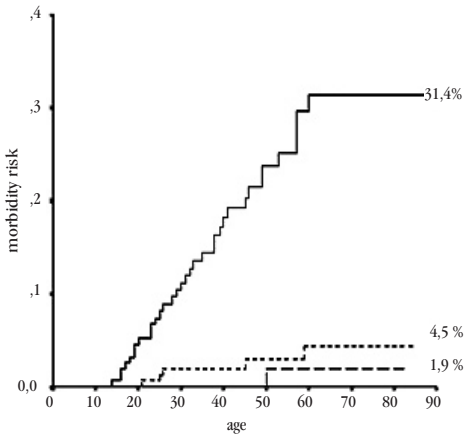

Figure 4 - Morbidity risk for cycloid psychoses in first-degree relatives.

CONCLUSION

This paper proposes the concept of cycloid psychosis according to Leonhard as a possible solution of the problem of the "atypical psychoses". Cycloid psychoses show a high diagnostic stability and thus – in their three characteristic forms of presentation - seem to be a clear-cut, independent nosological entity and represent no intermediate phenomena in a hypothetic concept of a schizo-affective or bipolar spectrum.

Full recovery after each episode warrants significantly better outcome and social function compared to schizophrenic patients, similar to healthy controls.

Generally, heredity plays a subordinate role in the aetiology of cycloid psychosis. In formal genetic studies, cycloid psychoses show comparable concordance rates between mono- and dizygotic twin as well as low familial morbidity-risk for homonymous cases or other endogenous psychoses.

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