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Schizophrenic delusions: the detection of warning signals

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Abstract

Schizophrenic delusions are important target symptoms for treatment. This study aims to identify predictors of delusion formation. Two samples of schizophrenic patients (total $n=131$) are examined prospectively every second week during a period of 6 months. In one sample ($n=60$) delusion formation ($n=27$; 45%) is correlated significantly with a change in score of eight individual items from the Early Signs Scale (ESS): sleep, anxiety, concentration, irritability, coping, tiredness, depression and confusion. These eight items form the Warning Signals Scale (WSS). The predictive validity of the scale is tested in another sample ($n=71$), of which 43 patients (61%) have reemergence of delusions. A criterion cut-off score of ≥ 5 points combines an acceptable sensitivity (77%) and specificity (68%). The scale is acceptable to patients, manageable for clinicians, and it has a high degree of predictive validity and reliability. This makes it relevant for implementation in ordinary clinical practice.

Keywords: Schizophrenia; Delusions; Early signs; Warning signals

1. Introduction

Delusions are prominent features that may veil any other psychotic symptom or problem in patients with schizophrenia. Therefore, delusions are important target symptoms for treatment in clinical psychiatry, and this raises the question how to prevent their formation.

Classic authors recognize a predelusional state which has been designated by numerous terms: e.g., Wahnstimmung, Trema, fait primordial, conscience morbid and perplexity. Because of its fleeting and kaleidoscopic nature and opaqueness to analysis, this mental state has not been well studied. During predelusional state the patient is expected to report experiences for which he may not even have a name and for which the interviewer has no conceptual clarity. Experiences that are similar may thus be reported as depersonalization, bodily sensations, dysphoria, changes in perception of reality or time, dissolution of ego boundaries, etc. It is therefore not surprising that, since the 19th century, predelusional state has been considered in turn a disorder of cognition, emotions, volition and consciousness (Fuentenebro and Berrios, 1995).

In modern psychiatry most studies are based on populations defined by diagnostic categories rather than individual symptoms. Therefore, past interest in the predelusional state has been replaced by current attention to the prodromal phase of schizophrenia and affective disorder. The concept of

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prodrome is, however, unclear but agreed on as a precursor of schizophrenic symptoms. The most common early signs of impending relapse are those of increased subjective dysphoria such as agitation, anxiety, tension and depression, as well as social withdrawal and difficulty sleeping. Nevertheless, Bustillo et al. (1995) suggest that the effective clinical use of early signs depends on, for instance, the inclusion of both psychotic and non-psychotic symptoms. As reviewed by Norman and Malla (1995) only few studies have assessed the direct relationship between putative prodromal symptoms and the exacerbation of psychosis.

The main aim of this study was to test the predictive validity (sensitivity and specificity) of self-reported early signs of schizophrenic delusions:

(1) Which are the ESS items in which changes predict delusion formation in schizophrenic patients?
(2) To what degree do these items predict delusion formation in another sample when delusion formation is defined as a rating of moderate or greater on the Positive Scale of PANSS when preceded by an initial remission period?

2. Materials and method

The study was performed at psychiatric departments in the county of Aarhus during 1996–1997. Patients were included consecutively at discharge when starting outpatient treatment. All patients gave informed consent and fulfilled the diagnostic criteria for schizophrenia according to the DSM-IV (American Psychiatric Association, 1994) and the ICD-10 (World Health Organization, 1992). A few patients ($n=11$) were excluded during the study: four patients suddenly refused self-monitoring, six patients stopped treatment and contact, and one patient died. The excluded patients did not significantly differ from the included patients as to gender, age, illness duration and degree of psychopathology.

The study population was divided into two sections. Sample 1 included patients who were studied for individual items with correlation to delusion formation. The predictive validity of this group of warning signals was tested on Sample 2.

The study did not interfere with treatment. Clinicians instituted themselves any change of treatment independently of the study protocol.

The patients were interviewed every second week during 6 months or to relapse. At each interview the mental condition of the patients during the last 72 h was assessed according to the Positive Scale (PS) of the Positive and Negative Syndrome Scale (PANSS) (Kay, 1991), including delusions, conceptual disorganization, hallucinatory behavior, excitement, grandiosity, suspiciousness/persecution and hostility. Each item was measured as a numerical score ranging from 1 (absent) to 7 (extreme).

Furthermore, the patients were monitored using the Early Signs Scale (ESS) (Birchwood et al., 1989), which consists of four subscales dealing with the last 2 weeks: anxiety, depression, disinhibition and incipient psychosis, and a total score. The ESS contains 34 items measured as a 4-point score ranging from 0 (not a problem) to 3 (marked problem, at least once a day). The baseline ESS score was defined by the average score of three consecutive self-reports. The author has shown elsewhere (Jørgensen, 1998) that a criterion cut-off score of ≥ 10 points compared to the baseline ESS-score in Sample 1 combines a high degree of sensitivity (74%) and specificity (79%) in predicting a psychotic relapse.

Delusions were defined by a rating of 'moderate' or greater, representing an increase by at least 2 scale points in the PS item of delusions. Delusion formation must be preceded by an initial remission period of at least 1 month.

3. Results

Two study samples were selected. Table 1 shows the samples distributed according to gender, age, illness duration, and PANSS and ESS score. At the beginning of the study the samples were comparable, except for the fact that patients in Sample 2 disclosed no positive symptoms.

All patients were maintained on neuroleptic medication during the entire observation period.