Monitoring of Prodromal Symptoms
A Method for Medication Management of Schizophrenia?

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Summary

Repeated relapse occurs in a large number of individuals with schizophrenia. Detection of impending relapse by monitoring of prodromal symptoms may allow the adjustment of medications and the reduction of stressors. This can subsequently avert or attenuate relapse.

Most studies of prodromal symptoms in schizophrenia are retrospective in nature, and use varying definitions of relapse and measures of prodromal symptoms. Nevertheless, these studies provide evidence that the majority of individuals with schizophrenia, and their family members, do identify prodromal symptoms anytime between 1 to 8 weeks prior to relapse. Prospective studies demonstrate that monitoring prodromal symptoms is somewhat effective in predicting relapse after stabilisation of symptoms has occurred.

Four studies examined what individuals do when prodromal symptoms are present. The majority of individuals attempt to regulate prodromal symptoms with self-treatment measures, including self-treatment with antipsychotics. Factors that appear to enhance self-monitoring and -regulation of prodromal symptoms are: (i) the characteristics of patients, i.e. the ability to make an association between symptoms and changes in functioning; (ii) characteristics of their illness, i.e. prodromal symptoms are better predictors of relapse in stabilised patients;
and (iii) characteristics of treatment, i.e. availability of mental health professionals, case management services and support systems.

Meeting with patients, family members and case managers to identify prodromal symptoms and to plan strategies for regulating these symptoms is recommended.

Detection of impending relapse is a major concern for individuals with schizophrenia and for clinicians. Prodromal symptoms (defined as early or premonitory symptoms of a disease) are the primary markers of relapse. Early identification of prodromal symptoms offers hope of preventing, or at least lessening, the devastating effects of relapse by allowing time in which to increase antipsychotic medications and reduce patient stressors. Early identification of prodromal symptom(s) and subsequent self-regulation to prevent relapse requires active participation by patients. A review of the research in this area underscores the benefits of patient participation.

1. The Stress-Vulnerability Model of Schizophrenia

The stress-vulnerability model of schizophrenia, which describes the onset of the disorder and subsequent relapses, provides a context for both medical and psychosocial interventions.

1.1 Vulnerability and Relapse in Schizophrenia

Vulnerability refers to the defects in brain structure and functioning that may be a consequence of genetic, pre- or postnatal brain injury or some other unknown cause. Antipsychotic medication addresses the vulnerability component of the stress-vulnerability model of schizophrenia. As early as the 1970s, Davis demonstrated that maintenance antipsychotic medication compared with no medication reduced 1-year relapse rates from 65 to 30%. More recent studies demonstrate that lower doses, equivalent to haloperidol 10 to 20 mg/day, of antipsychotic medications are generally adequate to achieve a comparable response, with a greater chance of compliance because of a decrease in short term adverse effects. The incidence of long term sequelae, such as tardive dyskinesias, dystonias and akathisias, are also reduced with low dose maintenance regimens.

Two methods of reducing antipsychotic doses can be used – intermittent or continuous low dose regimens. Three controlled 2-year studies, by Carpenter et al., Herz et al. and Jolley and colleagues, assessed continuous low dose versus intermittent medication regimens in community-based populations. In the study by Herz et al., patients were withdrawn from the study if they experienced 3 episodes of prodromal symptoms, full relapse or episodes of relapse lasting longer than 9 weeks. At the end of 2 years, only 38% of the intermittently treated patients versus 72% of the continuous medication group remained in the study.

Carpenter and coworkers reported a higher hospitalisation rate and a lower employment rate for intermittently treated patients compared with patients receiving continuous low dose medication.

In the study by Jolley and colleagues, 83% of the intermittently treated group experienced prodromal symptoms versus 28% of the maintenance group. In addition, at the end of 2 years, although the total antipsychotic dosage received was lower in the group receiving intermittent therapy, the incidence of tardive dyskinesia was not significantly different between the 2 groups.

Based on these findings, continuous low dose medication strategies are preferable to intermittent medication strategies in preventing relapse in patients with schizophrenia.

1.2 Stress and Relapse in Schizophrenia

While the presence of vulnerability factors is believed to be necessary for the development of