

Impact of Menstrual Cycle on Schizophrenia

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Abstract:

Hypothesis investigate the hypothesis that monthly cycle during its different phases may affect schizophrenia regarding severity and exacerbation of symptoms. **Method** We observed 40 female schizophrenic inpatients over two menstrual cycle. All subjects met ICD10 criteria for schizophrenia, and their psychotic symptoms rated using the positive and negative scale for schizophrenia (PANSS) during each of the three menstrual phases (premenstrual, menstrual, and postmenstrual). Data from the 27 subjects who completed the study used for statistical analysis. **Results** There was a significant correlation between date of admission (exacerbation) premenstrual and menstrual phase of the cycle. The mean total PANSS score for the 27 subjects was highest in the premenstrual phase and lowest in the postmenstrual phase, and a statistically significant difference was found among the three menstrual phases. There is statistical significant difference between follicular and luteal phase of the cycle regarding anxiety-tension and somatic symptoms but no changes in the psychotic symptoms. There is increase in rate of admission in premenstrual and menstrual phases of the cycle. **Conclusion** Our findings suggest that premenstrual exacerbation of symptoms in female schizophrenics may not be a worsening of the core schizophrenic symptoms but a concurrence of a cluster of affective, behavioral, and somatic symptoms which may be related to hormonal changes.

Introduction:

Emil Kraepelin proposed links between dementia praecox (schizophrenia) and hormones in 1892. Other early researchers, such as Hoskins, studied endocrine changes in people with schizophrenia at postmortem. Between 1940 and 1970, there was considerable interest in the psychoendocrinology of schizophrenia. As the role of neurotransmitters in the regulation of pituitary hormone release via hypothalamic hormones becomes clearer, neuroendocrine studies in people with schizophrenia aim to use the pituitary gland as the "window to the brain." Although Lieberman and Koreen (1993) concluded in a large review that the hypothalamic-pituitary-thyroid axis, in general, has not been shown to manifest disturbances in schizophrenia. Meanwhile clear omission from the neuroendocrine studies described to date is the study of hormonal profiles in women with schizophrenia as researchers have often excluded women because of a putative inability to control the variable fluctuating monthly hormonal cycles. In considering the relationship between gonadotrophin and other gonadal steroids and mental state in patients with schizophrenia. Several studies have demonstrated that symptoms of psychotic disorders such as schizophrenia or affective

disorders are aggravated before or during menstruation (Hallonquest et al., 1993 and Dennerstien et al., 1983) and that psychiatric admissions increase during these times (Targum et al., 1991 and Luggin et al 1984). Because of this, much attention has been paid to the relationship between psychiatric illnesses and the menstrual cycle so several studies and case reports on the premenstrual changes in symptoms in women with schizophrenia have also been published some of which supporting the concept of MDS (menstrual distress syndrome). (Click and Stewart 1980) other reports that schizophrenic symptoms are exacerbated during the premenstrual phase, when the blood estrogen level is low. (Levitte., 1997) So There is a question of whether the premenstrual exacerbation of the symptoms of schizophrenia is a worsening of the schizophrenic symptoms related to the low estrogen level or a concurrence of a specific syndrome characterized by a cluster of affective, behavioral, and somatic symptoms (Riecher-R et al., 1994). Hurt et al., 1982 reported that the prevalence of premenstrual depression in female schizophrenics was approximately 65%. In a study of the changes in symptoms related to the menstrual cycle in schizophrenic women, Harris.,