

An Interesting Presentation About Cyclical Menstrual Psychosis with an Updated Review of Literature

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ABSTRACT ~ Cyclical menstrual psychosis is an uncommon, generally a self-limiting mental illness that occurs only in females. It is associated with other menstruation-related disorders and stressful psychogenic factors. Nonetheless, many cases remain unrecognized due to poor awareness of its presence. A young female who presented with psychotic and mood symptoms during each cycle of menstruation was admitted to the psychiatric inpatient unit. There was severe disruption in her activities of daily living and socio-occupational functioning. Treatment involved bio-psycho-social approach in collaboration with Ob-Gyn team with symptoms responding well to a combination of valproic acid and risperidone. Severe affective instability with evident psychosis during menstrual cycle should be evaluated for cyclical menstrual psychosis. *Psychopharmacology Bulletin*. 2018;48(3):16–21.

INTRODUCTION

Although the possible connection between menstruation and psychological disorder was first noticed in the 18th century,¹ it was Krafft-Ebing who first identified mental illness associated with menstruation and coined the term menstrual psychosis.² It is an acute and mostly self-limiting affective disorder usually seen after a menstrual period. It does not necessarily affect every menstrual cycle. However the psychotic and mood symptoms can be severe and intense and requires management by a comprehensive medical and psychiatric assessment and might also require a collaborative approach with the Ob-Gyn team. Though the mainstay of the treatment involves using either neuroleptics or mood mood stabilizers; hormonal treatments have been used and has variable response.³

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The literature on menstrual psychosis is sparse and is based mainly on case reports, retrospective accounts, reports from relatives and prospective studies without adequate evidence on duration and dating.³ This case is presented due its uncommon incidence and also to develop more awareness among the professional colleagues about its nosological status, etiology and effective management strategies.

CASE PRESENTATION

A 19-year-old African American female was admitted involuntarily for bizarre behavior, severe agitation manifesting as verbal and physical aggression. During her menstrual cycle she was found at home naked on the floor with blood all over the floor. The patient expressed paranoia that her family had cast a spell on her by “putting a voodoo”, and they wanted her to commit suicide. The patient would respond to unknown stimuli by laughing hysterically for hours as well as endorsing persecutory delusions that people were out to kill her.

Psychiatric evaluation revealed a patient who had recurrent episodes of moderate depression occurring 5–6 days prior to her menstrual period that would resolve 4–5 days after cessation of menstruation and then followed by brief episodes of mania/hypomania for up to 4 days. The patient experienced erratic sleep patterns and appetite changes during these depressive/manic episodes. Her symptoms were variable in intensity and severity but were always related to her menstruation. Most episodes resolve spontaneously without treatment.

The patient’s gynecologic history revealed that the patient had menarche at age nine. Her periods were every 30 days lasting 6–7 days. Bleeding was heavy with extremely painful cramping. She had one spontaneous abortion in the past. She had not been treated for her heavy, painful periods with any hormonal therapy. Her past medical history included sexual abuse as a child by a close family member. She experienced intrusive memories, nightmares and flashbacks about the abuse. Social history was significant for substance use disorder in parents. Physical examination was notable for a systolic ejection murmur and pallor. Gynecologic examination was reported normal. Laboratory evaluation including a basic metabolic profile, liver function tests, CBC, Vitamin B12 and Folic acid level, and urinary drug screening were negative except for an iron deficiency anemia.

HOSPITAL COURSE

The patient was admitted to the psychiatric unit for two weeks. She was initially treated with haloperidol 10 mg/day but as she developed

extrapyramidal symptoms, treatment was changed to risperidone 4 mg/day. In addition to risperidone, mood swings were addressed with valproic acid at a dose of 1000 mg/day. She was educated about the risks and benefits of valproic acid including teratogenicity and polycystic ovarian disease. The patient responded well to these medications. Following acute stabilization of psychosis and affective symptoms, she engaged appropriately with the group activities and supportive psychotherapy. Follow up with an outpatient psychiatrist and Ob-Gyn team was arranged before discharge from the hospital. She was also referred to Gynecology follow-up to consider hormonal therapies for suppression of her menstrual cycles.

DISCUSSION

Women fill nearly forty percent of their life in premenstrual or menstrual phase. Cyclical menstrual psychosis is a serious mental illness and has a significant impact on the quality of life. Early recognition and treatment of this condition is essential. Brockington³ defined the characteristic features of menstrual psychosis as: 1. Acute onset, against a background of normality 2. Brief duration, with full recovery 3. Features of confusion, stupor and mutism, delusions, hallucinations, or a manic syndrome and 4. Periodicity in rhythm with the menstrual cycle. The possible unawareness of this condition among professionals makes many cases go undiagnosed or misdiagnosed. Due to its rarity there are no systematic studies to establish its incidence. Nevertheless, there are several cases that have been reported from different parts of the world. Menstrual psychosis is cyclical in nature with some authors contending that it falls in the realm of cycloid psychosis which occurs predominantly in females. Karl Leonard⁴ defined cycloid psychosis as a distinct mental disorder which differs from schizophrenia and bipolar affective disorder by complete recovery of symptoms with treatment, no chronic deterioration and being more prevalent in females. A significant number of females have both postpartum psychosis and menstrual psychosis at different times in their lives. A similar estrogen cascade etiology has been proposed in puerperal psychoses.⁵ Just as puerperal psychosis falls within the category of bipolar affective disorder,^{3,6} some argue that menstrual psychosis should be included in the same nosological category. Some researchers believe that there is a pathological spectrum that encompasses menstruation-related disorders like premenstrual syndrome and premenstrual dysphoric disorder.⁷

Krafft-Ebing² first recognized these disorders and classified them as menstrual psychosis by their onset relative to menstrual periods. 1. Premenstrual Psychosis: Starts in the second half of the cycle and ends

with abrupt recovery at the onset of menstrual bleeding 2. Catamenial Psychosis: starts with the onset of menstrual flow 3. Para-menstrual Psychosis: with variable timing, always in harmony with the menstrual cycle 4. Mid-cycle Psychosis: Usually occurs in the mid-cycle, which is relatively rare 5. Epochal menstrual Psychosis: Bipolar psychosis lasting for the complete cycle with switches linked to menstruation.

In 1914, Jolly^{3,6} reclassified menstruation related psychosis based on the stage of reproductive life 1. Single episodes at menarche: Single episode of psychiatric illness with the menarche 2. Circa-menstrual Psychosis: A florid psychotic episode occurs only during a period of amenorrhea 3. Onset after childbirth: Periodic mental illness with menstrual period after childbirth 4. Menopause: Periodic psychosis begin after the menopause. Psychosis or mood disturbance usually starts during premenstrual time and resolves within a few days to a week after menstrual flow.⁸ Generally it resolves by itself after few months. Sometimes these episodes recur during menopause. It has been hypothesized that these brief psychoses are associated with anovulatory cycles⁹ thus explaining their occurrence at the extremes of the reproductive span when anovulatory cycles are more likely.

Many etiological theories have been proposed for cyclical menstrual psychosis: 1. Psychodynamic theory: a negative attitude and difficulty in accepting femininity induces castration anxiety, leading to disintegration of the ego structure.⁸ 2. Genetic theory: Many case reports include first-degree relatives also with menstrual psychosis⁵ or with other psychoses related to female reproduction.¹⁰ 3. Hormonal theory: No single hormonal mechanism has been explained but it is felt that the menstrual psychosis is due to a disturbance in the pituitary-ovarian axis. There is a nonspecific association with several pituitary secreted hormones and overactivity of hypothalamo-pituitary-adrenal (HPA) axis. However it is clear that menstruation-associated psychosis is linked to an ovulatory cycles.¹¹ 4. Estrogen hypothesis: Menstrual psychosis can be triggered by a sudden reduction in estrogen level in the central nervous system in susceptible females after a sustained rise which has a priming effect on the brain.¹² In the luteal phase, some females are biologically more susceptible to hormonal fluctuations. 5. Interaction of serotonin/dopamine and estrogen/progesterone with other biological systems in the brain has a major role.¹¹ Their association with abnormal menstruation, i.e., anovulatory cycles, luteal problems and the cyclical nature, implicates an origin in the hypothalamus.¹⁰

Female patients with psychosis seem to have deficit in estrogen function and the illness fluctuates cyclically with estrogen levels.¹³ Treatment with estrogen, progesterone or the combination has variable responses. Suppression of menstrual cycles significantly reduces the cyclical

symptoms. Sex hormones can modify the monoamine oxidase activity and also the functional activity of the brain neurotransmission. It has been hypothesized that estrogen activity can dampen the monoamine activity and enhance norepinephrine activity.¹⁴ However, in some cases it has been found that due to its common association with anovulatory cycles, induction of ovulation and regaining the normal menstrual cycles is helpful to reduce the symptoms. Clomiphene is helpful in treating females with anovulatory cycles.⁹ Letrozole is another potential choice for ovulation induction in patients who are resistant to clomiphene citrate.¹⁵ Goserelin a GnRH agonist has been used and successfully treated menstrual psychosis in some cases.¹⁶

The mainstay of pharmacological treatment in cyclical menstrual psychosis is with neuroleptics, mood stabilizers and hormonal therapy. In our patient with cyclical mood symptoms and florid psychotic symptoms, treatment with both valproic acid and risperidone led to symptom remission.

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CONCLUSION

Menstrual cycle is a relatively high-risk period for development of mental illness in some females. Severe mood swings and psychotic symptoms during menstrual cycle can mimic a bipolar illness. Cyclical menstrual psychosis is a distinct category of mental illness which should be managed by a multidisciplinary team. Severe affective instability with evident psychosis during menstrual cycle should be evaluated for cyclical menstrual psychosis. ❀

CONFLICT OF INTEREST

None

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