



Menstruation-related psychosis

Abstract

Menstrual cycle and women mental health is related to each other. It is because of the endocrinological changes in women during her menstruation period. Psychosis in women during her menstruation is one of the serious mental health issues. Many a time, it is unnoticed by clinician. Here we are presenting a case of menstruation-related psychosis. To conclude, this type of cases help us to not only find the endocrinological importance in women mental health but also in prevention and management of such cases.

Keywords: Endocrinology. Women. Mental Health.

**Binita Talukdar¹, Kunal Deb²,
Soumik Sengupta³**

¹Senior Resident, Department of Psychiatry, LGB Regional Institute of Mental Health, Tezpur, Assam, India, ²Assistant Professor, Department of Psychiatry, LGB Regional Institute of Mental Health, Tezpur, Assam, India, ³Assistant Professor, Department of Psychiatry, LGB Regional Institute of Mental Health, Tezpur, Assam, India

Correspondence: Dr. Binita Talukdar, Senior Resident, Department of Psychiatry, LGB Regional Institute of Mental Health, Tezpur-784001, Assam, India.
bini.talukdar@gmail.com

Received: 2 August 2018

Revised: 13 November 2018

Accepted: 13 November 2018

Epub: 17 December 2018

INTRODUCTION

From the time of 18th century, study is going on the connection between menstruation and psychological disorder.[1] Amard gave a brief description of premenstrual psychosis in 1807. Krafft-Ebing in 1902 described 19 cases and wrote about this in his monograph "Psychosis Menstrualis". There he described menstrual psychosis, ovulation psychosis, and epochal menstrual psychosis.[2,3]

Characteristics of menstrual psychosis are: a) acute onset; b) brief duration with full recovery; c) psychotic features: confusion, stupor and mutism, delusions, hallucinations, or a manic syndrome; d) occur in rhythm with the menstrual cycle (circamensual). There are five types of menstrual psychosis: premenstrual, catamenial, paramenstrual, midcycle, and epochal.[4]

Many studies reveal that the changing level of sex hormone during menstruation can affect pre-existing psychiatric illness or may cause psychiatric illness in a healthy individual.[5,6] Research suggests that the cause of menstrual cycle-related mental health problems are mainly hormonal. Psychiatric conditions like schizophrenia and mood disorder exacerbate during the menstrual cycle and it is due to fluctuation of oestrogen level.[7] Gonadal steroids regulate the functions of central neurotransmitters, such as serotonin, dopamine, norepinephrine, and gamma-aminobutyric acid (GABA).[8] In premenstrual (late luteal) phase level of oestrogen, progesterone and levels of

their metabolites decrease and it remains low in menstrual (follicular) phase.[9] It is seen that there is an increase of psychotic symptoms in schizophrenia during the luteal phase of the menstrual cycle, and hypothesis says that it is due to increased oestrogen sensitivity in dopaminergic receptors.[10] In functional magnetic resonance imaging (fMRI) studies, it was shown that due to oestrogen reaction, response to stress decreases, and this indicates that psychotic findings triggered with stress may be due to the decline in oestrogen levels.[11,12] Here, we are presenting a case of psychosis which occurs during the time of menstruation.

THE CASE

A 35 years old married female was admitted in the Lokopriya Gopinath Bordoloi Regional Institute of Mental Health (LGBRIMH), Tezpur, Assam, India with six days history of decreased interaction with other, decreased sleep, withdrawn behaviour, decreased personal care, and decreased oral intake. She has also reported that these symptoms occurred three days after start of menstruation. In the initial two days during menstruation, she has complained of dysmenorrhoea, weakness, decreased interest in eating, decreased activity, most of the time lying on the bed, not liking to talk to anyone. From third day onwards, she developed symptoms of decreased sleep, her interaction with others decreased more from the previous time, her personal care, work function was also impaired. Her past history revealed that she had two episodes of psychosis; the first episode was in 2011 which occurred two days after

menstruation and lasted for four days; the second episode was in 2015 which also happened two days of menstruation and lasted for five days. In the first episode in 2011, her symptoms were decreased interaction with other, reduced sleep, withdrawn behaviour, decreased personal care, and decreased oral intake, which started two days after menstruation. At that time, they had consulted a psychiatrist and her symptoms subsided with medication within four days (documents are not available). Similarly, in 2015 during her second episode also, symptoms occurred on second day of menstruation, and her symptoms were similar to the first episode, and it subsided spontaneously after five days. Her menstrual history revealed that her menarche started at the age of 13 years, she had irregular menstrual cycle, lasted for five to seven days, and it was associated with dysmenorrhoea. Before menstruation in every cycle, she experienced premenstrual symptoms in the form of a low backache, breast pain, feeling tired, bloating. There was no history of any medical illness, no history of taking any medication like steroid, oral contraceptive pill in the past. On mental status examination, she was conscious, alert, decreased psychomotor activity, rapport not established, eye to eye contact not maintained, decreased productivity in speech, irrelevant speech, oriented to time, place, and person, poor judgement and insight. She was diagnosed to be a case of acute and transient psychotic disorder according to the tenth revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).[13] She was started with tablet olanzapine 7.5 mg and tablet clonazepam 1 mg and with this medication her symptoms improved and achieved complete remission. She was discharged from hospital after ten days.

DISCUSSION

This paper reported a case of acute and transient psychotic disorder which occurred during menstruation with past history of similar episodes and with the history of an irregular menstrual cycle. There are many literatures which can explain about psychosis during her menstruation.

Tarazi *et al.*[14] reported a case of psychosis which occurred one to two days prior to menstruation and she had past history of similar episode. In our patient, we had found that symptoms occurred three days of menstruation.

Karatepe *et al.*[15] also reported a case of 17 years old girl who presented with psychotic symptoms and it occurred one to two days prior to menstruation. Wright and O'Keane[16] reported a case of 14 years old girl presenting with psychotic episodes coinciding with her menstrual cycle. Shah *et al.*[17] also reported a case of psychosis in a 16 years old girl which occurs during her menstruation and resolves when it is over.

There are some other studies which can explain the exacerbation of symptoms in schizophrenic patients during

her menstruation and it is due to low level of oestrogen.[18] This type of cases helps us to find out the causes of psychosis and also find out the endocrinological importance in such cases.

REFERENCES

1. Desmilleville Observation adressée à M. Vandermonde, sur une fille que l'on croyoit possédée. *J Méd Chir.* 1759;10:408-15.
2. Krafft-Ebing R. Untersuchungen über Irresein zur Zeit der Menstruation. *Arch Psychiatrie.* 1878;8:65-107.
3. Krafft-Ebing R. *Psychosis Menstrualis.* Eine klinisch-forensische Studie. Stuttgart: Enke; 1902.
4. Brockington I. Menstrual psychosis. *World Psychiatry.* 2005; 4:9-17.
5. Lande RG, Karamchandani V. Chronic mental illness and the menstrual cycle. *J Am Osteopath Assoc.* 2002;102:655-9.
6. Rapkin AJ, Akopians AL. Pathophysiology of premenstrual syndrome and premenstrual dysphoric disorder. *Menopause Int.* 2012;18:52-9.
7. Hendrick V, Altshuler LL, Burt VK. Course of psychiatric disorders across the menstrual cycle. *Harv Rev Psychiatry.* 1996;4:200-7.
8. Abel KM, Kulkarni J. Depression in women: hormonal influences. In: Castle D, Kulkarni J, Abel KM, editors. *Mood and anxiety disorders in women.* New York: Cambridge University Press; 2006:116-36.
9. DeBatissa C, Smith DL, Schatzberg AF. Modulation of monoamine neurotransmitters by estrogen: clinical implications: gender differences in mood and anxiety disorders. *Review of Psychiatry.* Washington DC: American Psychiatric Press; 1999:137-60.
10. Wieck A, Davies RA, Hirst AD, Brown N, Papadopoulos A, Marks MN, *et al.* Menstrual cycle effects on hypothalamic dopamine receptor function in women with a history of puerperal bipolar disorder. *J Psychopharmacol.* 2003;17:204-9.
11. Goldstein JM, Jerram M, Poldrack R, Ahern T, Kennedy DN, Seidman LJ, *et al.* Hormonal cycle modulates arousal circuitry in women using functional magnetic resonance imaging. *J Neurosci.* 2005;25:9309-16.
12. Read J, van Os J, Morrison AP, Ross CA. Childhood trauma, psychosis and schizophrenia: a literature review with theoretical and clinical implications. *Acta Psychiatr Scand.* 2005;112:330-50.
13. World Health Organization. *The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines.* Geneva: World Health Organization; 1992.
14. Tarazi MS, Al-Atrash F, Dandona P, Kuhadiya ND. A case of menstruation related psychosis-a rare entity. *Gen Med.* 2016;4:231.
15. Karatepe HT, Işık H, Sayar K, Yavuz F. Menstruation-related recurrent psychotic disorder: a case report. *J Psychiatry Neurol Sci.* 2010;23:282-7.
16. Wright ZE, O'Keane V. Menstrual psychosis in an adolescent girl. *Prog Neurol Psychiatry Case Notes.* 17-23.
17. Shah AB, Vahia VN, Yadav R, Sonavane SS. Menstrual psychosis: a case report. *Indian J Psychiatry.* 2003;45:61-2.
18. Sönmez İ, Köşger F. Menstrual cycle in schizophrenic patients: review with a case. *Noro Psikiyatr Ars.* 2015;52:417-9.

Talukdar B, Deb K, Sengupta S. Menstruation-related psychosis. *Open J Psychiatry Allied Sci.* 2018 Dec 17. [Epub ahead of print].

Source of support: Nil. **Declaration of interest:** None.