MENSTRUATION RELATED PERIODIC HYPERSOMNIA SUCCESSFUL OUTCOME WITH CARBAMAZEPINE (A Case Report)

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Introduction

Menstruation related periodic hypersomnia is defined as marked hypersomnolence occurring in regular temporal relationship with menstrual cycles [1]. The condition was first described by Lhermitte in 1942 [2]. About 20 cases conforming to the description have been reported in world literature [3,4]. No case of this nature has so far been reported from our country. Recently the American Sleep Disorder Association has included this clinical syndrome under the broad rubric of 'menstrual related sleep disorders' along with premenstrual insomnia and menopausal insomnia [5].

Case Report

The patient, aged 13, was a fun loving school going girl. She had shifted to Delhi from her village in Uttar Pradesh in February 1988 along with her mother. In August 1988 she started sleeping continuously for 5-6 days at a stretch every month save the interruptions, enforced by family members, for toilet and food. When woken up she would cry and say "What is happening to me?" and would promptly fall back asleep. However, she used to be her usual self in between the monthly episodes of hypersomnolence. Menarche occurred in December 1988. Episodes of excessive sleep continued to occur every month with onset a day prior to menses and continuing through the flow period. A spontaneous remission occurred in October 1990 followed by asymptomatic regular monthly cycles till March 1992. In April and May 1992 she again had episodes of hypersomnolence of the same nature as before. Amenorrhoea ensued from June 1992 onwards. In mid-June she started feeling sleepless followed within a short time by irrelevant and incessant speech associated with gross self-neglect and assaultive behaviour. She attempted to run away from home several times. By August 1992 her behaviour deteriorated to the extent that she would pass urine and faeces in bed without any qualms. The alarmed parents then brought her for psychiatric consult-

ation.

Her physical growth was commensurate to her age with well developed secondary sexual characters. At first evaluation she straight way jumped on to the examination couch and called psychiatrist a "pagla". She then proceeded to sing, shout and laugh loudly in great abandon. Her utterances had no logical coherence. Later, she expressed fear of a 'Nagin' which was trying to bite her and of a huge witch on a flying horse which threatened to take her away. Memory and orientation were not impaired. Routine investigations, blood sugar levels, liver function tests, STS, awake EEG, CT scan brain and clinical gynaecological evaluation revealed no abnormality. Psychotic symptoms abated quickly under haloperidol 15 mg/day orally.

She went into another episode of hypersomnolence on 1 October 92. Menstruation started on 2 October 92. Hypersomnolence and menstruation continued till 5 October 92. At this stage haloperidol was tapered off and she was put on carbamazepine 600 mg/day. She had remained asymptomatic after institution of carbamazepine therapy. The drug was discontinued after 2 years of symptom free cycles of menstruation.

Neither the hypersomniac episodes nor the solitary psychotic episode was associated with seizures, sexual disinhibition, mastalgia, megaphagia, bloating or dysphoria. Her mother too suffered from similar episodes of periodic hypersomnia until relieved by pregnancy. She continued to remain asymptomatic after the birth of her first child (the patient). The patient has three sisters. All of them are asymptomatic.

Discussion

Besides the positive family history the three intriguing aspects in this case are the onset of cyclical hypersomnia preceding menarche, spontaneous remission of more than an year and occurrence of psychosis during the period of amenorrhoea. Some cases of periodic psychosis associated with menstruation have been reported in world literature [6]. However there are no reports of psychotic episodes occurring in patients suffering from periodic

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hypersomnolence of menstruation.

The etiology of the condition remains obscure. Generalised epileptic discharges and increased serotonin turnover in brain were reported in one case [4]. The interrelationships of central neurotransmitters and sex hormones have not been clearly elucidated so far. Serotonin is known to promote slow wave sleep (SWS) while catecholaminergic system inhibit SWS and promote waking [7]. Oestrogens have mixed dopaminergic and anti-dopaminergic actions in the central nervous system [8]. Hence the predominance of either type of action of oestrogens on the dopaminergic system should determine the effect of oestrogens on sleep. Drawing an inference of genetic predisposition for such a predominance, citing the occurrence of similar illness in the mother, would amount to over-generalisation. In the patient hypersomnolence occurred at a stage when the oestrogen and progesterone levels were expected to be low. High levels of sex hormones, occurring during pregnancy, apparently induced a permanent remission in the mother. Some episodes of excessive sleep occurred before the onset of menarche in the patient. Considering the above factors it can be assumed that low levels of sex hormones brought about by some central dysregulation, possibly in susceptible individual, were responsible for the episode of excessive sleep. However, it is difficult to hazard a parsimonious explanation for all the features of the case.

The present case had no features of Klein-Levin syndrome. Neither did it conform to the description of premenstrual syndrome. Though it is tempt-

ing to consider it as a variant of bipolar disorder or recurrent brief depressive disorder the clear association with menstruation rules out such consideration. Based on the clinical hypothesis of a putative central dysregulation and an earlier experience of the author with a case of periodic hypersomnia the patient was administered carbamazepine with gratifying outcome. However it can also be argued that the patient had a natural remission as it had happened in the mother. Awareness of the disorder probably will lead to the identification of more cases and their exhaustive study.

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