Reprinted from the German Journal of Psychiatry · http://www.gjpsy.uni-goettingen.de · ISSN 1433-1055

CASE REPORT

Comorbid Obsessive-Compulsive Disorder in a Patient With Kleine-Levin Syndrome

Rudraprosad Chakraborty [1], Arunima Chatterjee[2]

[1] Ranchi Institute of Neuropsychiatry and Allied Sciences, Ranchi, India
[2] Central Institute of Psychiatry, Ranchi, India

Corresponding author: Dr. Rudraprosad Chakraborty, M.D., D.P.M., Senior Resident, Ranchi Institute of Neuropsychiatry and Allied Sciences, Ranchi, India, pin: 834006; E-mail: rudrapc@yahoo.com

Abstract

This case report describes an adolescent boy suffering from alternating episodes of Kleine-Levin syndrome and Obsessive Compulsive disorder. His mother and brother suffered from Obsessive-Compulsive Disorder. Comorbid Obsessive-Compulsive disorder with Kleine-Levin syndrome is still not reported in literature. Probably reported for the first time ever, this case may give important clue about the pathophysiology of the extremely rare Kleine-Levin syndrome (German J Psychiatry 2007; 10: 1-).

Keywords: Kleine-Levin syndrome, obsessive-compulsive disorder, comorbidity

Received: 25.01.2007
Revised version: 20.7.2007
Published:

Introduction

Kleine Levin syndrome (KLS) is a rare disorder characterized by periodic hypersomnolence and hyperphagia (Conklin et al, 2005). The etiopathology of this disorder still remains obscure (Black et al., 2004). Comorbidity data can give clue to possible etiopathology of a disease. Unfortunately, comorbidity data of KLS are still insufficient. Although compulsive behavior like compulsive singing (Muratori et al., 2002), body rocking (Papacostas and Hadjivasilis, 2000), chewing lips (Thacore et al., 1969), fire setting (Powers and Gunderman, 1978) have been described to occur in patients with KLS , there is still no report of clear-cut syndrome of Obsessive Compulsive disorder (OCD) comorbid with KLS. A MEDLINE search performed on January 25, 2007 with Kleine-Levin Syndrome, obsessive compulsive disorder, and comorbidity returned no results. We describe possibly the first case of comorbid KLS and OCD with an interesting relationship between the symptoms.

CASE REPORT

Mr. R. K., a 17 year old boy came with a history suggestive of episodic excessive sleepiness since last two years. Following an episode of a viral fever, he acutely developed an irresistible urge for sleep and spent sleeping throughout the day, waking up only to eat voraciously or to urinate or defecate. He used to be very irritable and aggressive if awakened from sleep and experienced poor concentration and lethargy after getting up. There was no history suggestive of a depressive episode. This episode lasted continuously for nine months and after that gradually and spontaneously reached full remission.

However, he remained well for 6 months and then all the above symptoms recurred. This time polysomnography was done. This revealed 90.1% sleep efficiency, increased sleep fragmentation, sleep onset latency of 1.0 minute, stage 2 and stage 3 sleeps occurring during 45.8% and 37.65% of total sleep time respectively. There were frequent awakenings and no REM sleep. Q-EEG was normal. Detailed physical and neurological examinations were also normal. The second

episode continued for six months with no improvement despite separate adequate trials of fluoxetine (20mg/day) and lithium (900 mg/day). We started modafinil 200mg/day, with which patient achieved 100% improvement in both sleep and appetite.

However, after maintaining about 3-4 weeks' remission on modafinil, patient started complaining having repeated doubts that he might not have done things properly. He might not have locked the door or he might not have answered questions in the right way despite knowing fully well that those doubts were baseless. He always considered the thoughts of his own. In all occasions, he could got rid of the thoughts, albeit temporarily, by uttering a religious prayer. Until he murmured those prayers, he used to feel increasingly anxious. The whole experience was bothering him too much to continue studies properly. The symptoms were diagnosed as obsessive–compulsive (OC) symptoms and he was prescribed fluoxetine 20 mg/day along with modafinil 200 mg/day. At present after about 1 month of treatment, he reports somewhat decrease in OC symptoms.

The patient revealed a past episode of acute onset illness 3 years back characterized by repeated doubts about cleanliness and repeated washing. Shortly after onset of that episode, he also experienced repeated doubts about whether he has done something perfectly or not, repeated distressing blasphemous thoughts and repeated doubts that he might harm anybody. Compulsive thinking of holy sermons in response relieved anxiety temporarily. He always considered these thoughts of his own, was greatly distressed and resisted hard as they hampered his studies significantly. Problems gradually increased over next few months. He was then treated with fluoxetine 20 mg/day and improved considerably within next one year. However, he discontinued medicines soon after. He remained well for few months when his presenting complaints of sleep and appetite problem started.

Family history revealed both patient's mother and eldest brother suffering from Obsessive-Compulsive Disorder. Unfortunately, none of them ever received any treatment.

Discussion

The strong familial loading as well as the episodes of OCD in the present case point towards a possible relationship between KLS and OCD. Comorbidity and joint familial loading are two criteria that may place a disease in obsessive-compulsive (OC) spectrum (Phillips, 2002). Further research is needed to examine whether KLS is really an OC spectrum disease or not.

Indeed, this case showed an interesting relationship between KLS and OCD, so that KLS symptoms appeared when OCD symptoms were in remission and OCD symptoms reappeared when KLS symptoms were successfully treated. This raises a possibility that there may be some basic pathophysiology linked to both disorders which was differently expressed in different phases.

Interestingly an imbalance in serotonin system has been suggested as a possible underlying pathophysiology of KLS (Koerber, 1984) although it was not substantiated in recent research (Mayer et al., 1998). As serotonin system is strongly implicated in the genesis of OCD, the present case may well implicate serotonin system in pathogenesis of KLS. However, the inverse relationship between the two diagnoses observed in this case may suggest an opposite way of involvement, which needs to be further clarified by future studies.

References

Black JE, Brooks SN, Nishino S. Narcolepsy and syndromes of primary excessive daytime somnolence. Sem Neurol 2004; 24: 271- 82.

Conklin CM, Taunton JE, McCrory P. Kleine-Levin syndrome: a unique cause of fatigue in an athlete. Br J Sports Med 2005; 39: 7.

Koerber RK, Torkelson R, Haven G, Donaldson J, Cohen SM, Case M. Increased cerebrospinal fluid 5-hydroxytryptamine and 5-hydroxyindoleacetic acid in Kleine–Levin syndrome. Neurology 1984; 34: 1597–600.

Mayer G, Leonhard E, Krieg J, Meier-Ewert K. Endocrinological and polysomnographic findings in Kleine–Levin syndrome: no evidence for hypothalamic and circadian dysfunction. Sleep 1998; 21: 278–84.

Muratori F, Bertini N, Masi G. Efficacy of lithium treatment in Kleine–Levin syndrome. Eur Psychiatry 2002; 17: 232–3.

Papacostas SS, Hadjivasilis V. The Kleine–Levin syndrome. Report of a case and review of the literature. Eur Psychiatry 2000; 15: 231–5.

Phillips KA. The obsessive-compulsive spectrums. Psy Clin North Am 2002; 25: 791- 810.

Powers PS, Gunderman R. Kleine–Levin syndrome associated with fire setting. Am J Dis Child 1978; 132: 786–9.

Thacore VR, Ahmed M, Oswald I. The EEG in a case of periodic hypersomnia. Electroencephalogr Clin Neurophysiol 1969; 27: 605–6.