

## Kleine-Levine Syndrome Co-occurring with Bipolar Disorder

Ahmet TİRYAKİ, Filiz CİVİL ARSLAN, Mihriban YILDIRIM

Department of Psychiatry, Karadeniz Technical University School of Medicine, Trabzon, Turkey

Dear Editor,

Kleine-Levine syndrome (KLS) is a rare syndrome (1-2 reported cases per 1 million) that affects mostly men in young adulthood (1,2). The etiology of KLS is unknown however the reported flu-like symptoms prior to the initial KLS attack suggest that autoimmune mechanisms and genetic factors might have a role in the etiopathogenesis (3). The KLS attacks are characterized by hypersomnia (15-21 hour/day), cognitive impairment (apathy, confusion, slowness, amnesia), derealization (dreamy state, altered perception) and more infrequently hypersexuality and depressive mood (3). Common mechanisms as circadian rhythm abnormalities and clinical similarities indicate a possible relationship between KLS and mood disorders (1). A rare case of co-occurring KLS and bipolar disorder (BD) is presented in this report. Written consent was obtained from the patient for this presentation.

Thirty-four year-old man followed up for BD-I for 15 years was hospitalized with a preliminary diagnosis of mania depending on symptoms such as spending too much money, excessive talking and eating, hypersexuality, disorganized behaviours. The patient was not using his medications regularly. The previously prescribed treatment regime was consisted of valproic acid 1000 mg/day, lithium 600 mg/day, lamotrigine 200 mg/day and risperidone 6 mg/day. On the sixth day of hospitalization under the previous treatment strategy a severe hypersomnia attack was observed. The patient could only be woken up for his daily needs by repetitive external verbal and physical stimuli. The patient's past history revealed that most of the attacks were as the current one. KLS was suspected 5 years ago on his first admission to our inpatient clinic. But at that time the diagnosis could not be cleared for the patient failed to take a polysomnography (PSG) test during hypersomnia. On the last admission PSG was performed during hypersomnia that revealed increased sleep activity, shortening of sleep latency and reduction in percentage of phase III sleep which were consistent with KLS. Besides EEG was normal. Encephalomalasia on the left parietal region of brain was detected on MRI. The treatment was continued with lithium 600mg/day, lamotrigine 400 mg/day and aripiprazole 30 mg/day. After 13 days of excessive sleeping, all the symptoms improved and the patient was discharged.

In the current case, the overlapping symptoms of BD and KLS led to a big confusion on diagnosis because of a complicated past history of the symptoms and medications. According to detailed history there were two types of attacks. In the first type insomnia, hypersexuality, disorganized behaviours were followed by hypersomnia periods. In the second form, symptoms of psychotic mania were evident without any hypersomnia period. The overlapping of KLS and mania symptoms and the occurrence of pure mania periods were a challenge to reach to an accurate diagnosis for 15 years. There are 3 case reports on co-occurrence of BD and KLS in the literature (1,4,5). Due to the heterogeneity of BD symptoms, it is difficult to differentiate KLS co-occurring with BD as in the current case. The proper diagnosis of KLS is important to initiate the appropriate treatment to have a better prognosis. Immune-inflammatory etiology and genetic vulnerability are proposed mechanisms for the two diseases (3,6). Moreover, deterioration of circadian rhythm is well known in BD and defined in KLS. Although BD and KLS have common clinical characteristics the relationship of the two diseases is not clear.

Kleine-Levine syndrome is often misdiagnosed. Cooccurring KLS and BD is a very complicated clinical condition that causes a long delay in the establishment of accurate diagnosis.

**Cite this article as:** Tiryaki A, Civil Arslan F, Yildirim M. Kleine-Levine Syndrome Co-occurring with Bipolar Disorder. Arch Neuropsychiatry 2017; 54:284-285.

**Correspondence Address:** Filiz Civil Arslan, Karadeniz Teknik Üniversitesi Tıp Fakültesi, Psikiyatri Anabilim Dalı, Trabzon, Türkiye  
E-mail: filiz\_civil@yahoo.com

**Received:** 05.02.2016 **Accepted:** 13.05.2016 **Available Online Date:** 11.11.2016

©Copyright 2017 by Turkish Association of Neuropsychiatry - Available online at www.noropskiyatrisivi.com

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept - A.T., F.C.A.; Design - A.T., F.C.A.; Supervision - A.T., F.C.A.; Resources - A.T., F.C.A.; Materials - A.T., F.C.A.; Data Collection and/or Processing - M.Y.; Analysis and/or Interpretation - A.T., F.C.A., M.Y.; Literature Search - A.T., F.C.A.; Writing Manuscript - A.T., F.C.A.; Critical Review - A.T., F.C.A.; Other - A.T., F.C.A.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## REFERENCES

1. Geoffroy PA, Arnulf I, Etain B, Henry C. Kleine-Levin syndrome and bipolar disorder: a differential diagnosis of recurrent and resistant depression. *Bipolar Disord* 2013;15:899-902. [[CrossRef](#)]
2. Erdem M, Bolu A, Garip B, Karaman D, Yetkin S. Clinical and Polysomnographic Features of Kleine-Levin Syndrome: Case Series. *Arch Neuropsychiatry* 2013;50:288-290.
3. Arnulf I, Lin L, Gadoth N, File J, Lecendreux M, Franco P, Zeitzer J, Lo B, Faraco JH, Mignot E. Kleine-Levin syndrome: a systematic study of 108 patients. *Ann Neurol* 2008;63:482-493. [[CrossRef](#)]
4. Wilder J. A case of atypical Kleine-Levin syndrome: 30 years' observation. *J Nerv Ment Dis* 1972;154:69-72. [[CrossRef](#)]
5. Jeffries JJ, Lefebvre A. Depression and mania associated with Kleine-Levin-Critchley syndrome. *Can Psychiatr Assoc J* 1973;18:439-444. [[CrossRef](#)]
6. Hamedani N, Tamouza R, Leboyer M. Immuno-inflammatory markers of bipolar disorder: a review of evidence. *Front Biosci (Elite Ed)* 2012;4:2170-2182. [[CrossRef](#)]