

# Mania after CPAP starts in a man with Obstructive Sleep Apnea, a case report

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## Introduction

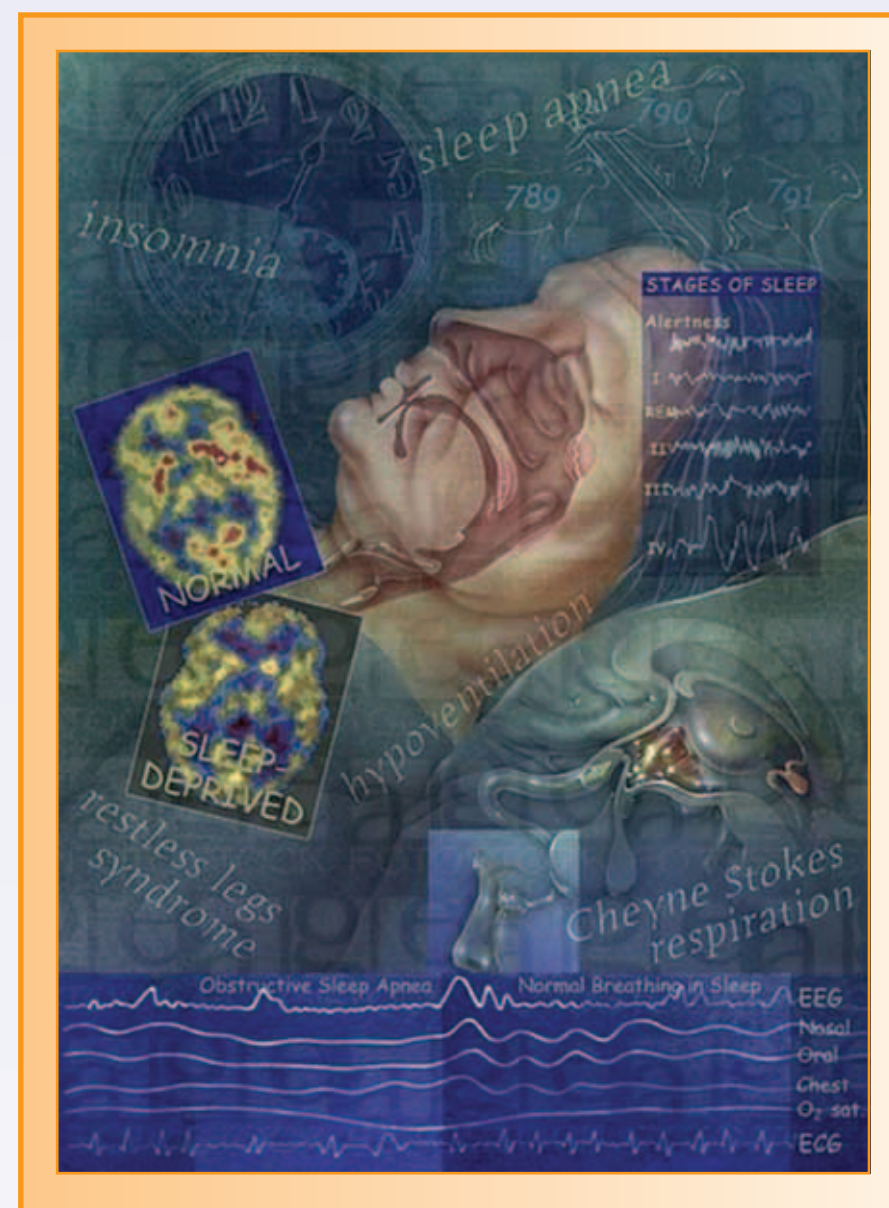
We present the case of a 64 years old male with chronic subdepressive symptoms, who switched to a first maniac episode co-occurring with starting a daily CPAP treatment. Different possible associations between affective syndromes, OAS and CPAP treatment are mentioned and discussed.

## Case report

The case is a 64 years old man, without personal or familial psychiatric history. As medical history, he had a diagnostic of Diabetes Mellitus II in treatment with Metformine. The patient was usually tired, sleepy during the day, without much energy in the last ten years. Four months before the admission his GP indicates a polysomnography test because of suspecting OAS. The polysomnography revealed a high number of Apneas and Hypoapneas with moderate undersaturation. CPAP treatment and diet measures were indicated. CPAP was initiated two months before the beginning of the psychiatric symptomatology.

One month after starting CPAP treatment, the patient switched lingering to a manic state. Different complementary tests were done. Cranial Computerised Axial Tomography, Thyroid hormones anomalies in blood

count, liver or kidney function that showed no medical cause. One month after the beginning of the symptomatology the patient was admitted to hospitalization. The patient showed verbosity, motor hyperactivity and megalomaniac thoughts. He was assessed with the Mania Rating Scale, scoring 33 at admission. Risperidone titrated to 9 mg per day and valproate titrated to 1200 mg per day were used as essential treatment, obtaining valproate plasma levels of 50.23 mcg/ml. Mood stabilization (MRS Score: 8) was obtained in 15 days proceeding to discharge the patient. The episode was assessed using the Structured Clinical Interview for DSM IV Disorders SCID-I obtaining a clinical diagnostic of Bipolar Disorder, Recent Episode: Severe Mania without psychotic symptoms.



## Discussion

It has been suggested an association between bipolarity and sleep apnea syndrome. Four different association mechanisms may explain this relation: 1) Patients suffering from OAS may show depressive-like symptoms with hypersomnia secondary to hypoxemia and a lighter sleep with reductions in stages 3, 4 and REM. 2) Depressive symptoms in OAS patients could be secondary to OAS understood as any other medical condition provoking a functional limitation and, subsequently, lower mood. 3) A specific association may exist between mood regulation (not only depression) and sleep abnormalities. Different items underpin this theory: A major rate of sleep arousals and unstable circadian activity patterns are strongly associated

with Bipolar Disorder. Moreover, sleep disturbances have been reported as early signs of both mania and depression in bipolars. Non REM and REM period alterations (usually a shortened REM period latency) are widely found in affective disorders persisting even after clinical improvement; In some patients suffering OAS, an impairment in cognition and mood may persist even after CPAP treatment. To sum up, an association between mood regulation, specifically manic and depressive states, and sleep disturbances seems to exist. The case presented above may serve as a possible example of this association. Future research would be needed in order to ensure this existence of this association and find out the mechanisms underlying.

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