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**REM SLEEP BEHAVIOR DISORDER CAUSING SUBDURAL HEMATOMA**

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## 1. Introduction

An 80-year-old man with a two-year history of idiopathic REM sleep behavior disorder (RBD) presented to the emergency department because of progressive unsteady gait and mental slowness and right limb weakness during in the previous two weeks. Neurological examination showed right hemiparesis with Babinski sign, and Hhead CT scan demonstrated a left chronic subdural hematoma. One month before the patient had fallen out of the bed when he was sleeping, hitting his head against the nightstand while he dreamt he had to jump out of his car because it was going to fall off a cliff. As a consequence, the patient suffered a laceration to the left forehead that required several suture stitches. Due to mild daytime somnolence, the patient had abruptly stopped clonazepam (0.5 mg at bedtime) a week before he jumped out of the bed. Past medical history included arterial hypertension and depression treated with paroxetine. The patient did not take any anticoagulant or antiplatelet therapy. Idiopathic RBD had been diagnosed eight months before because of a two-year history of violent nightmares associated with sleep talking, punching and kicking. Video polysomnography (three weeks after suppressing paroxetine) demonstrated excessive tonic and phasic muscle activity during REM sleep associated with body jerks, punching and vocalizations. Clonazepam 0.5 mg at bedtime reduced the intensity and frequency of nightmares and dream enactment behaviors. The patient stopped abruptly clonazepam a few months later because of mild daytime somnolence, and few days later he jumped out of bed resulting in the subdural hematoma. After surgical removal of the subdural hematoma, mental slowness and gait instability and resolved but mild right hemiparesis improved persisted. Clonazepam was reinitiated and protective measures were placed in the bedroom. Additional sleep-related falls or injuries did not occur after nine months of follow-up.

## 2. Image analysis

Head CT scan on an axial sequence shows a large subdural hematoma on the left convexity causing a midline deviation of eight millimeters with compression of the lateral left ventricle (Figure A, arrows). The hematoma is hypodense, which reflects its chronic nature, with some hyperdense areas indicative of acute bleeding. After subdural hematoma, pillows and a bed rail were added in the patient's bedroom to cover the nightstands and prevent further falls and injuries (Figure B and C). Eight months before the subdural hematoma and three weeks after suppressing paroxetine a diagnostic video-polysomnography was performed. A 30-second epoch during REM sleep (Figure D) showed abnormally increased tonic and superimposed phasic EMG activity in the mentalis as well as excessive phasic EMG activity in the upper and lower limbs, associated with body jerks, punching and vocalizations; these elements are all characteristic of RBD.

## 3. Discussion

The present case illustrates the potential danger of abrupt discontinuation of clonazepam, which may cause a rebound of RBD symptomatology and increase risk of injury. Patients with RBD are at risk for sleep-related injuries because of the vigorous and action-filled dream-enacting behaviors. Self-inflicted injuries occur in 38 to 59% of patients (particularly prior to treatment), and are usually consequences of hitting a wall or nightstand, or jumping out of bed [1, 2]. Mild bruises, lacerations, and sprains are the most frequent injuries seen in RBD, but extreme cases include dislocations, fractures, and rarely subdural hematomas [1-5]. Clonazepam and melatonin (which can be less sedating and worth to consider as a first option in elderly patients) are both effective to reduce the intensity and frequency of abnormal sleep behaviors and injuries. ~~Abrupt discontinuation of clonazepam, as seen in our case, may allow reappearance of RBD symptomatology~~ [1]. Safety measures in the bedroom, such as removing or protecting nightstands or other pieces of furniture with hard surfaces and sharp corners, installing bed rails, or placing a mattress, cushions or blankets on the floor or adjacent wall to the bed, are also effective measures for reducing the risk of injuries.

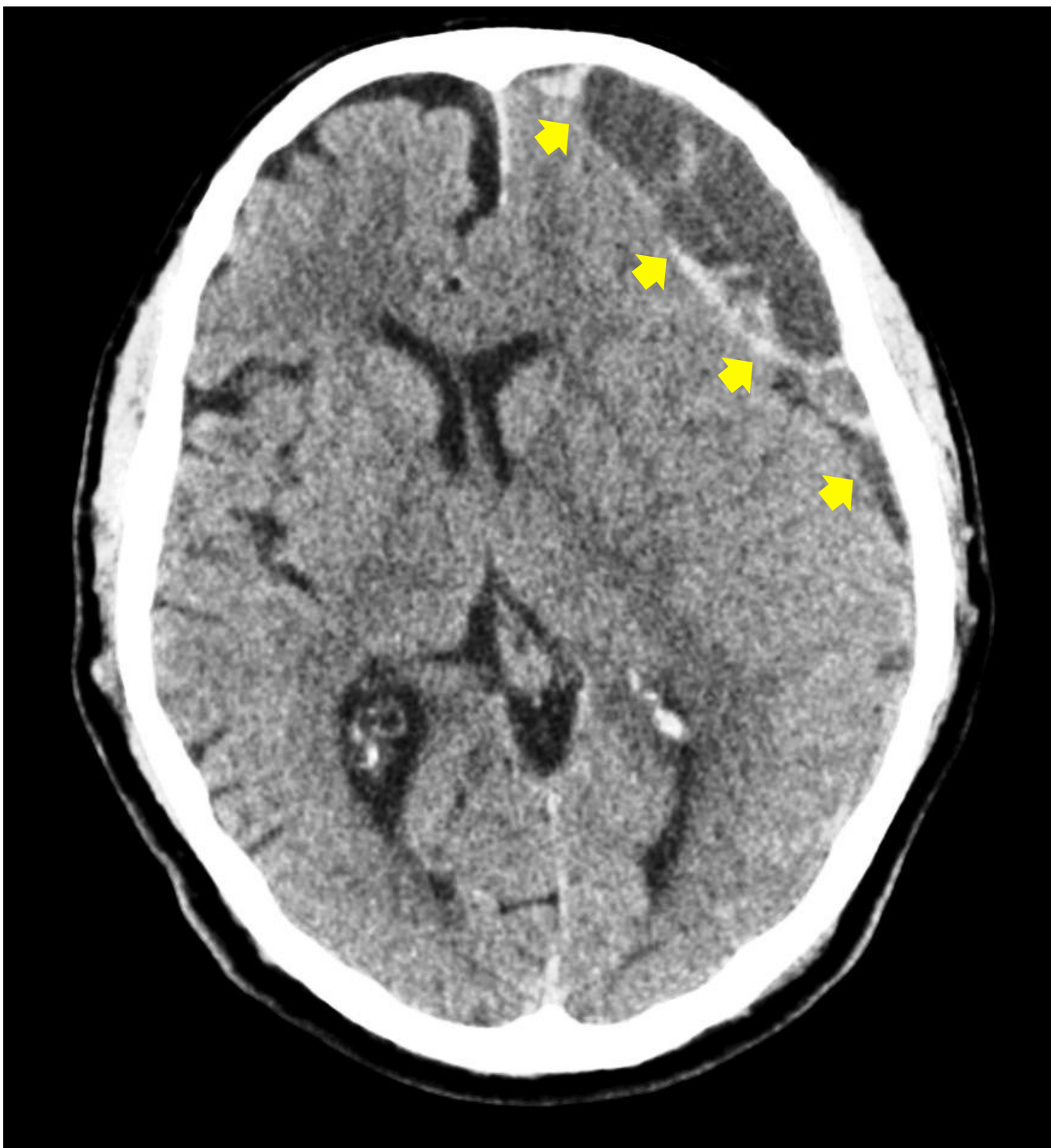
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**Conflict of interest:** None.

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**Figure Legend:**

**A****B****C****D**