Restless Leg Syndrome Induced by an Acute Withdrawal of Oxycodone

Joon Hyun Baek, MD, Su-Hyun Han, MD, Sang-Ahm Lee, MD
Department of Neurology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea

Restless leg syndrome (RLS) can develop secondary to various medical conditions. Some medications, as well as some opioid withdrawal, are known to induce RLS. Opioids modulate the dopamine system via their receptors and change the sensitivity to dopamine. Abrupt withdrawal of opioid may cause an endogenous opioid deficit state and disturb the dopamine system, which can lead to a transient dopamine dysfunctional state such as RLS. We reported a man with secondary RLS after acute withdrawal of the opioid, oxycodone, which has not been previously reported.

Key Words Secondary restless leg syndrome, Oxycodone, Opioid, Dopamine.
There was no previous history of neurologic disease and family history of RLS. In addition to oxycodone/naloxone complex, he was taking tenofovir disoproxil fumarate, ursodeoxycholic acid, silymarin, sorafenib, megestrol acetate, and metoclopramide for managing hepatocellular carcinoma. His ferritin level increased to 524.0 ng/mL possibly due to acute inflammatory reaction of hemoperitoneum. Hemoglobin, iron and total-iron binding capacity was within normal limit. His nerve conduction study also showed no significant abnormality. Neurological examination was normal.

We diagnosed oxycodone withdrawal-induced RLS and prescribed pramipexole 0.375 mg qhs and pregabalin 225 mg qhs. However, there was no improvement in the uncomfortable sensation. The dosage of pramipexole and pregabalin were increased up to 1.5 mg qhs and 300 mg qhs, respectively, and tramadol 50 mg was added at night. At that time, the severe abdominal pain recurred and he restarted taking oxycodone/naloxone complex by himself. The irresistible and uncomfortable sensations on both legs dramatically subsided. So he did not take the prescribed medications for RLS.

**DISCUSSION**

Several diseases can mimic RLS, but most of them do not fulfill the 4 cardinal features of RLS.

In conclusion, abrupt withdrawal of oxycodone treatment may induce secondary RLS. Clinicians should be aware of the possibility of RLS development when oxycodone is abruptly discontinued.

**Conflicts of Interest**

The authors have no financial conflicts of interest.

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