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CASE REPORTS

Status Cataplecticus Precipitated by Abrupt Withdrawal of Venlafaxine

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Status cataplecticus is a rare manifestation of narcolepsy with cataplexy episodes recurring for hours or days, without a refractory period, in the absence of emotional triggers. This case highlights a narcoleptic patient who developed status cataplecticus after abrupt withdrawal of venlafaxine.

Keywords: Status cataplecticus, narcolepsy, cataplexy, venlafaxine withdrawal

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Cataplexy is a symptom of narcolepsy triggered by strong emotion that causes sudden muscle atonia with preserved consciousness. It may represent intrusion of REM sleep phenomena into wakefulness.[1] A refractory period of up to several hours typically follows a cataplexy attack.[2] Persistent cataplexy, known as status cataplecticus, is a rare, often misdiagnosed manifestation of cataplexy. Failure to recognize this condition can lead to unnecessary diagnostic testing that delays appropriate therapy.[2]

Tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), and serotonin-norepinephrine reuptake inhibitors (SNRIs) prevent cataplexy.[3] Enhancement of noradrenergic and serotonergic activity may reduce cataplexy by inhibiting "REM-on" neurons in the lateral dorsal tegmentum (LDT) and pedunculopontine tegmentum (PPT).[3] The precipitous decrease in noradrenergic and serotonergic tone occurring upon abrupt discontinuation of therapy may elicit status cataplecticus, presumably by disinhibition of "REM-on" neurons.[3] Interestingly, discontinuation of sodium oxybate, another anticataplexy medication that may exert its effect via $GABA_B$ receptors, has not been associated with status cataplecticus.[4]

REPORT OF CASE

A 76-year-old female was evaluated 20 years ago for hypersomnolence and "irresistible sleep attacks" that began during adolescence. She experienced sleep paralysis but denied hypnogogic or hypnopompic hallucinations. Strong emotion such as anger, happiness, or excitement often precipitated slurring of speech, flattening of facial expression, and leg weakness. She cannot recall whether cataplexy appeared concurrently or after onset of somnolence. Medical history was significant for hypertension treated with lisinopril. Polysomnography demonstrated a normal apnea-hypopnea index. Multiple sleep latency testing revealed a mean sleep onset latency of 3 minutes with 3 sleep-onset REM periods. She was HLA-DQB1*0602 positive. CSF hypocretin levels were not obtained. The diagnosis of narcolepsy with cataplexy was made at age 56, nearly 40 years after symptom onset.

Initial treatment consisted of imipramine and methylphenidate. Persistent cataplexy and hypersomnolence prompted a change to sodium oxybate and modafinil with almost complete resolution of symptoms. Sodium oxybate (9 grams nightly) was continued for seven years until she reported somnambulism and nocturnal sleep eating with multiple falls. As these were likely NREM parasomnias associated with sodium oxybate, anticataplexy therapy was changed to venlafaxine ER 75 mg/day. Cataplexy persisted, but further increase in venlafaxine was precluded by worsening hypertension, an adverse effect of venlafaxine. Fluoxetine 20 mg was suggested. The following day, she developed gastroenteritis; while she continued venlafaxine, she reported emesis shortly after taking medication. The next day, emotional upset triggered cataplexy, consisting of slurred speech and weakness in all extremities; this was witnessed by her family. Unlike her usual cataplexy episodes which rapidly resolve, she experienced continuous cataplectic attacks over the next 4 h, despite absence of further emotional triggers. She maintained consciousness throughout but recalled vivid hallucinations. Fluoxetine was ineffective; upon resuming venlafaxine, cataplexy resolved within several hours. Neurologic examination was not performed during status cataplecticus but was normal the following day after resolution of cataplexy.

DISCUSSION

Our patient experienced status cataplecticus within 48 hours of abrupt withdrawal of venlafaxine, due to diminished absorption from gastroenteritis. The resultant rapid decrease in noradrenergic and serotonergic tone may have precipitated status cataplecticus.[3] Status cataplecticus has been reported in narcoleptic patients after abrupt withdrawal of clomipramine, a serotonergic reuptake inhibitor that augments adrenergic tone via its metabolite, desmethylimipramine.[3] Protracted episodes of cataplexy have also been reported after gradual withdrawal of TCAs and SSRIs, peaking 40 to 60 days after discontinuation.[3] Status cataplecticus may also occur with administration of prazosin, an α-adrenergic antagonist.[5]

While the neurophysiologic basis of cataplexy remains unclear, decreased hypocretinergic activity with reduced noradren-

ergic tone, possibly from decreased activity of locus coeruleus neurons, may contribute to decreased motoneuron excitation during cataplexy. Dysfunction of other neurotransmitters, including dopaminergic systems, may also contribute to cataplexy.[6]

Status cataplecticus is a rare complication in narcolepsy resulting from abrupt discontinuation of noradrenergic and serotonergic medications. Behavioral management restricting social interaction to minimize cataplexy triggers, and limiting ambulation, may be helpful during status cataplecticus. Anticataplexy medications, with individualized risk-benefit analysis regarding adverse effects, such as parasomnias and fluid retention from sodium oxybate, hypertension from venlafaxine, and anticholinergic effects from clomipramine are necessary. First line therapy for cataplexy is sodium oxybate; however in this case, risk of falls from somnambulism in an elderly woman outweighed benefits. Venlafaxine ER was reinitiated and gradually increased to 150 mg/day with resolution of cataplexy; escalation of antihypertensive therapy controlled blood pressure.

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