

Prominent eye movements during NREM sleep and REM sleep behavior disorder associated with fluoxetine treatment of depression and obsessive-compulsive.

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Prominent Eye Movements During NREM Sleep and REM Sleep Behavior Disorder Associated with Fluoxetine Treatment of Depression and Obsessive-Compulsive Disorder FREE

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Summary

The clinical polysomnographic (PSG) reports of 2,650 consecutive adults studied during 41 months were reviewed retrospectively to identify all patients treated with fluoxetine or tricyclic antidepressants. The PSG reports of four other adult groups were also reviewed: periodic limb movement (PLM) disorder (n = 28); sleep terror/sleepwalking (ST/SW) (n = 54); rapid eye movement (REM) sleep behavior disorder (RBD) (n = 70); patients with clinically unremarkable sleep during two consecutive PSG studies (n = 30). Standard PSG recording and scoring methods were employed. A total of 1.5% (n = 41) and 2.0% (n = 52) of patients were receiving fluoxetine or tricyclics (amitriptyline or nortriptyline, n = 31; imipramine or desipramine, n = 16; protriptyline or trimipramine, n = 5). A selective association between fluoxetine and extensive, prominent eye movements in nonrapid eye movement (NREM) sleep was detected, utilizing Fisher's exact one-tailed statistic ($p < 0.00001$ for each comparison). The detection rates were fluoxetine, 48.8% (20/41); tricyclics, 5.8% (3/52); RBD, 4.3% (3/70); objectively normal sleepers, 3.3% (1/30); PLM, ST/SW, 0% (0/82). These groups had similar mean ages (31.5–45.4 years) and gender distributions (50.0–60.7% male), apart from RBD. The effect of fluoxetine, a potent and specific serotonin reuptake inhibitor, on NREM eye movements is postulated to derive from potentiation of serotonergic neurons that inhibit brainstem “omnipause neurons”, which, in

turn, inhibit saccadic eye movements, thus resulting in disinhibited release of saccades. In addition, a 31-year-old man with obsessive-compulsive disorder developed RBD soon after starting fluoxetine therapy, which persisted at PSG study 19 months after fluoxetine discontinuation.

Keywords: Fluoxetine, NREM sleep eye movements, Polysomnography, Obsessive-compulsive disorder, Serotonin, REM sleep behavior disorder, Depression

Topic:

amitriptyline

eye movement

adult

antidepressive agents, tricyclic

depressive disorders

fluoxetine

neurons

night terrors

nocturnal myoclonus syndrome

obsessive-compulsive disorder

polysomnography

protriptyline

rem sleep behavior disorder

saccades

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