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Chronic benzodiazepine usage and withdrawal in insomnia patients.

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Abstract

We studied the sleep of patients with insomnia during continuous and very long-term use of benzodiazepines (BZDs), and after withdrawal. A group of 25 patients (mean age 44.3+/-11.8 years) with persistent insomnia, who had been taking BZDs nightly for 6.8+/-5.4 years was selected. The control group was comprised of 18 age-matched healthy individuals. Sleep stage parameters were analyzed during Night 1 (while taking BZDs), Night 2 (first night after completing BZD withdrawal), and Night 3 (15 days after gradual BZD withdrawal). Sleep data for control subjects was monitored in parallel. Sleep EEGs of the patients were analyzed using Period Amplitude Analysis (PAA), during Nights 1 and 3 only. During BZD use, a significant reduction of Total Sleep Time (TST) and increased sleep latency were found in the insomniac group when compared to controls. We found an increase in stage 2 non-REM (NREM) sleep, and a reduction in Slow Wave Sleep (SWS) when comparing to night 3 (after withdrawal). Sleep EEGs analysis showed an increase in sigma band and decrease in delta count in stages 2, 3, 4 NREM and REM sleep in the BZD group when comparing to night 3 (after withdrawal). During the BZD withdrawal period, six out of nine subjects taking lorazepam failed withdrawal. In the remaining 19 subjects, gradual withdrawal of BZDs was associated with immediate worsening of nocturnal sleep, as indicated by sleep parameters. However, 15 days after withdrawal (Night 3), some of the sleep structure parameters of patients were not significantly different from baseline (while taking BZDs), except for a significant increase in SWS and in delta count throughout most sleep stages, and a decrease in stage 2 NREM sleep. These values were not different from those shown by control subjects. REM sleep parameters showed no significant variation across the experimental conditions. Subjective sleep quality was significantly improved on Night 3 compared with Night 1.

CONCLUSIONS: Chronic intake of BZDs may be associated with poor sleep in this population. A progressive 15-day withdrawal did not avoid an immediate worsening of sleep parameters. But at the end of the protocol, SWS, delta count, and sleep quality were improved compared to those recorded during the chronic BZD intake, despite the lack of change in sleep efficiency.

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