Correspondence

Modafinil use in patients with a primary psychiatric illness

***Warwick Black**, University of Notre Dame, Perth, Western Australia, **Peter Hoey**, Consultant Psychiatrist, Roseville, New South Wales, Australia, and **Thomas Mayze**, The Brisbane Clinic, Cleveland Queensland, Australia:*

Modafinil is an oral agent indicated to treat excessive daytime sleepiness in narcolepsy and chronic shift work sleep disorder, and in continuous positive airway pressure (CPAP) treated obstructive sleep apnoea/hypopnoea syndrome (OSA). It appears to work by affecting anatomical centres in the brain that regulate wakefulness [1]. Improvements in behavioural alertness, functional status, and health related quality of life as well as general mood elevating effects have been reported with modafinil, and it may have applications in a wide variety of general medical and psychiatric disorders [2–5].

We report four individuals with a variety of psychiatric diagnoses whose symptoms of fatigue, sleepiness or hypoarousal were treated successfully with modafinil. In each case the patient remains on modafinil therapy, with no significant adverse events reported to date.

The first patient had a 30 year history of bipolar disorder type 1, stabilized with lithium carbonate plus escitalopram, and a 5 year history of OSA successfully controlled by continuous positive airway pressure (CPAP) device. Over 3 years he experienced slowly worsening daytime sleepiness with no identifiable cause. At the time of this report the patient has been on modafinil 100 mg mane for 12 months. He reports increased alertness and marked reduction in sleepiness, and his Epworth Sleepiness Scale score has normalized. He has not experienced any mood instability coincident with modafinil use.

The second patient had experienced massive cerebral trauma requiring a long period of rehabilitation. He presented in a depressed, apathetic and unmotivated state. His medications (sertraline and lamotrigine) provided little improvement in his sense of well-being. Trials of atomexatine and low dose dexamphetamine were unsuccessful. The patient experienced a significant improvement in motivation and functioning with modafinil 200 mg midi, and a further improvement in his mood and subjective wellbeing with the addition of low dose selegiline.

The third patient is a 70 year old male with treatment resistant depression characterized by severe fatigue and a possible obsessive–compulsive spectrum disorder. Numerous trials of antidepressants and other psychotropic agents typically caused multiple side effects and negligible benefits. Comorbid illnesses, including hypertension, atrial fibrillation and congestive cardiac failure, exacerbated his fatigue. Modafinil 100 mg mane has provided a subjective improvement to the patient's quality of life, including an improvement in his sleep quality and mood, and a reduction in anxiety, without exacerbating his comorbid conditions.

Finally, a 32 year old female patient presented with severe uncontrolled trichotillomania, and depressive symptoms partially controlled by venlafaxine (300 mg/day). After trialling many different antidepressants, tranylcypromine 100 mg/day was found to relieve her mood symptoms and to partially improve her trichotillomania, but with the side effect of marked afternoon somnolence. This was relieved fully at modafinil 200 mg/day; and at 400 mg/day her hair pulling stopped completely. This is the first case report of modafinil in the treatment of trichotillomania.

Our experience with modafinil suggests that future studies should concentrate on identifying subgroups of patients with a primary psychiatric disorder who are most likely to benefit from treatment with this agent.

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References

1. Scammell TE, Estabrooke IV, McCarthy MT *et al.* Hypothalamic arousal regions are activated during modafinil-induced wakefulness. *Neuroscience* 2000; 20:8620–8628.

2. Czeisler CA, Dinges DF, Walsh JK *et al*. Modafinil for excessive sleepiness associated with shift-work sleep disorder. *N Engl J Med* 2005; 353:476–486.
3. Erman MK, Rosenberg R. Modafinil for excessive sleepiness associated with chronic shift work sleep disorder: effects on patient functioning and health-related quality of life. *Primary Care Companion to the Journal of Clinical Psychiatry* 2007; 9:188–194.
4. Taneja I, Hamam K, Shelton RC, Robertson D. A randomized, double-blind, crossover trial of modafinil on mood. *J Clin Psychopharmacol* 2007; 27:76–79.
5. Ballon JS, Feifel D. A systematic review of modafinil: potential clinical uses and mechanisms of action. *J Clin Psychiatry* 2006; 67:554–566.