Psychopharmacology for the Clinician

The information in this column is not intended as a definitive treatment strategy but as a suggested approach for clinicians providing treatment for patients with similar histories. Individual cases may vary and should be evaluated carefully before treatment is provided.

Treatment of bipolar disorder with comorbid migraine

A 43-year-old woman with bipolar type II disorder and comorbid migraine without aura had experienced recurrent depressive episodes since age 30 (some with complete, spontaneous recovery) and had taken various classes of antidepressants. During the past 5 years, she had a rapid-cycling course of illness, with depressive episodes of 3 weeks' duration and a week of hypomanic symptoms each month. She had been off all medications for a year and had a period of spontaneous temporary improvement. She experienced 3–4 typical migraine attacks per week from the age of 18, for which she had taken acetylsalicylic acid, butalbital with caffeine, and triptans (sumatriptan and rizatriptan) for a number of years with partial success.

The patient's history of recurrent illness with a fully remitting course before antidepressant treatment (as well as the fact that rapid cycling was likely secondary to antidepressant use) supports the likelihood of lithium response, for which lithium carbonate (600 mg/day) was started. However, daily ratings showed persistent depressive symptoms, for which we added moclobemide and thyroid replacement. The patient reported increased appetite and weight and, although her mood improved, some subsyndromal depressive symptoms persisted and the frequency of migraines increased. Topiramate was added and the antidepressant was stopped. A few weeks later, the frequency of her migraines decreased substantially (2 attacks per month) and her mood became stable. Eight years later, the patient remains well. She is currently taking lithium and topiramate, thyroid replacement therapy and clonazepam (as needed for insomnia and anxiety), and she intermittently uses bupropion for breakthrough depressive symptoms.

Migraine is defined as a recurrent headache disorder lasting 4–72 hours with a unilateral location and pulsating quality, which is aggravated by routine physical activity and associated with nausea and/or photophobia and phonophobia.[1] Annual estimates of migraine prevalence in the general population range from 3.3% to 21.9% for women and from 0.7% to 16.1% for men.[2] The rates are about 2-fold higher in patients with bipolar disorder,[3,4] particularly among those with type II and comorbid anxiety disorders.

Neuropeptide,[5–7] serotonergic[8,9] and dopaminergic systems[10–12] are involved in migraine. The main advances for acute migraine treatment in recent decades have been triptans and selective serotonin$_{1B/1D}$ antagonists. Migraine preventive agents include β-adrenergic blockers, methysergide, flunarizine, tricyclics and anticonvulsants (valproic acid and topiramate),[13] none of which are considered optimal. The main mechanisms of action of topiramate include effects on voltage and γ-aminobutyric acid–activated ion channels, as well as inhibition of the ionotropic glutamate *N*-methyl-D-aspartate, α-amino-3-hydroxy-5-methylisoxazole-4-propionic acid and kainate receptors.[14]

Topiramate has been recommended as an adjunctive therapy for maintenance treatment in bipolar disorder, but its efficacy is not supported by controlled trials.[15,16] Migraine and bipolar disorder share many characteristics, including an episodic course, vulnerability to stress, and family history of both migraine and affective disorder. Patients with both conditions use health resources extensively, and recognition and treatment of comorbid conditions improves the prognosis for patients with both disorders.[17,18]

In this population, triptans and antidepressants may be widely prescribed. The risk of serotonin syndrome appears to be low, but clinicians should be aware of the possible interaction and the rare, but serious, consequences. Mood fluctuations have been reported as side effects of triptan use, and careful monitoring of bipolar patients taking these medications is essential. The use of antidepressants in patients with bipolar disorder should be always considered with caution. Finally, an overuse of acute medication, which can transform the headaches into a chronic form and the potential for abuse should also be considered.

In the case of our patient, the core treatment for bipolar disorder was lithium. Topiramate was helpful in treating her migraines without adversely affecting the course of bipolar disorder. This case also shows that the standard treatment for bipolar disorder may vary depending on the presence of migraine.

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Competing interests: None declared.

DOI 10.1503/jpn.090166

Psychopharmacology for the Clinician columns are usually based on a case report that illustrates a point of interest in clinical psychopharmacology. They are about 500–650 words long and do not include references. Columns can include a bibliography which will be available only at the journal website and can be accessed through a link at the bottom of the column.
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