Letter to the Editor

Aripiprazole in Treating a Manic Episode Associated With Hydrocephalus: A Case Report

To the Editor: Two previous case reports have suggested that hydrocephalus is associated with mood cycles, including manic and depressive episodes. In both cases, mood symptoms were unresponsive to pharmacologic treatment, but resolved after surgical treatment.^{1,2} Here we report a case of a manic episode associated with normal pressure hydrocephalus. The manic but not the depressive symptoms showed a good response to aripiprazole treatment before surgery. However, because mood symptoms remained after surgery, treatment with aripiprazole was continued at the same dose.

Case report: Mr A, a 61-year-old man, suffered from irritability, hypertalkativeness, a decreased need for sleep, grandiosity, and aggression toward his family 1 month previously. According to his family, he was healthy, with good social functioning before admission. Three months ago, a sudden onset of depressive mood, urine incontinence, memory impairment, and ataxia occurred. He was sent to a local hospital and bupropion (150 mg/d) was prescribed. The depressive mood was mildly improved. After admission, Mr A received quetiapine (100 mg/d) to treat manic symptoms (per a DSM-IV diagnosis of mania). However, significant extrapyramidal side effects (EPS) appeared, including tremor, salivation, and akathisia. Meanwhile, urine incontinence and ataxia recurred. Brain magnetic resonance imaging revealed ventricular dilatation, and normal pressure hydrocephalus was diagnosed. After about 1 week, medication was switched to aripiprazole 10 mg/d. The manic symptoms improved significantly within 2 weeks. No EPS were noted. A ventriculoperitoneal (VP) shunt was performed when manic symptoms became stable. Mr A was discharged 6 weeks later in a stable mood condition, but with minor impairments of cognitive function.

Studies discussing pharmacologic treatment of manic episodes associated with hydrocephalus are scarce. Contrary to previous reports, our patient showed a good response to aripiprazole (10 mg/d). Aripiprazole is an atypical antipsychotic that has a unique partial agonistic effect at D_2 receptors. Its efficacy and safety in the treatment of manic episodes have been demonstrated.³ Interestingly, 2 recent positron emission tomography studies demonstrated that the binding of striatal D_2 receptors was reduced in normal pressure hydrocephalus⁴ and up-regulated after VP shunting.⁵ Moreover, both studies showed that changes in striatal D_2 receptors were correlated with improving emotional and cognitive function. Therefore, our case indicates that antipsychotic agents with partial D_2 receptor agonistic effects could stabilize the dopamine neurotransmitter system and help in the treatment of the psychological changes associated with hydrocephalus.

References

- Schneider U, Malmadier A, Dengler R, et al. Mood cycles associated with normal pressure hydrocephalus. *Am J Psychiatry*. 1996;153(10):1366–1367.
- Reisch T, Brekenfeld C, Barth A. A case of hydrocephalus occlusus presenting as bipolar disorder. *Acta Psychiatr Scand.* 2005;112(2):159–162, discussion 162–163.
- 3. Keck PE Jr, Marcus R, Tourkodimitris S, et al; Aripiprazole Study Group. A placebo-controlled, double-blind study of the efficacy and safety of aripiprazole in patients with acute bipolar mania. *Am J Psychiatry*. 2003;160(9):1651–1658.
- 4. Ouchi Y, Nakayama T, Kanno T, et al. In vivo presynaptic and postsynaptic striatal dopamine functions in idiopathic normal pressure hydrocephalus. *J Cereb Blood Flow Metab*. 2007;27(4):803–810.
- Nakayama T, Ouchi Y, Yoshikawa E, et al. Striatal D2 receptor availability after shunting in idiopathic normal pressure hydrocephalus. J Nucl Med. 2007;48(12):1981–1986.

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