Risperidone-Induced Dislocation of the Temporomandibular Joint

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We report a case of bilateral temporomandibular joint dislocation associated with antipsychotic-induced acute dystonia. Although this side effect of antipsychotics is rare, clinicians should still be aware of it.

Case report. Ms A, a 25-year-old woman, experienced her first psychotic episode with delusions of persecution and auditory hallucinations at 18 years of age. Gradually, she developed negative symptoms such as affective flattening, lack of motivation, and social withdrawal. In mid-2007, at the age of 21, she was admitted to a psychiatric hospital because of bizarre behavior and incoherence. Olanzapine treatment was started and increased to 10 mg/d under a *DSM-IV-TR* diagnosis of schizophrenia. After hospitalization for 6 months, she graduated from university and began part-time work, although auditory hallucinations continued.

In early 2010, olanzapine was switched to risperidone 3 mg/d because of drowsiness. After beginning risperidone treatment, Ms A dislocated her bilateral temporomandibular joint several times per week (more than 20 times in total), which required a manipulative reduction each time. Consequently, surgical treatment was considered as a therapeutic option for the recurrent mandibular dislocation, and 2 months after the start of risperidone therapy, she underwent an autologous blood injection into the bilateral temporomandibular joint. However, because the mandibular dislocation recurred a few days after the injection, she presented to the neuropsychiatry department of our hospital with her mandibular joint fixed in place by stainless steel wire.

A careful history from the patient and her dental surgeon revealed that mandibular dislocations were accompanied by involuntary oral gaping and tongue protrusion. Antipsychotic-induced acute dystonia was assumed to be the cause of the refractory mandibular dislocation. Therefore, risperidone treatment was changed to aripiprazole 12 mg/d. During aripiprazole treatment, the mandibular dislocation has ceased, and Ms A's psychiatric symptoms have also been relatively stable.

Dislocation of the temporomandibular joint related to use of antipsychotics was first reported by O'Hara in 1958.[1] There have been case reports in which acute dystonia in the oral region induced by first-generation antipsychotics such as perphenazine[2] and haloperidol[3] elicited mandibular dislocations. The prevalence of first-generation antipsychotic–induced acute dystonia has been reported to be as high as 33%.[4]

The second-generation antipsychotics, including risperidone, were introduced for their lower risk of extrapyramidal side effects. However, it has been revealed that there are differences among the second-generation antipsychotics in their ability to induce extrapyramidal symptoms because they are heterogeneous.[5] In clinical use, though, every antipsychotic, including the second-generation antipsychotics, can induce extrapyramidal side effects. In this case, a low dose (3 mg/d) of a second-generation antipsychotic, risperidone, induced severe acute oral dystonia, resulting in mandibular dislocation. A case was reported in which risperidone-induced acute dystonia caused unilateral mandibular dislocation in a 7-year-old boy suffering from attention-deficit/hyperactivity disorder.[6] The known risk factors for acute dystonia caused by antipsychotics are younger age, male sex, and use of high-potency antipsychotic drugs.

Dislocation of the temporomandibular joint is a rare yet serious side effect of antipsychotics for clinicians to remember. It is necessary to pay additional attention while using even second-generation antipsychotics, especially those such as risperidone that have a high affinity to dopamine D_2 receptors, in patients with a high risk of acute dystonia.

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