

Acute Trismus Follow Benzodiazepine Discontinuation in a Rural Addicted Patient

Running Title: Trismus Follow Benzodiazepine Discontinuation

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Dear Editor

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Various interesting, unusual, and uncommon etiologic agents of trismus are described in the literature. However, managing the former problem caused by using some drugs/substances or their discontinuation remains a dilemma for physicians. Medication-induced movement disorder is usually caused by psychotropic agents (1). One of its presentations is cringing. It can involve extremities, face, neck, abdomen, pelvic, and larynx muscles called acute dystonia (2). The pathophysiology of acute dystonia is still unknown, but it may be caused by the involvement of striatal dopaminergic and cholinergic function (3). Acute dystonic reactions depend on individual susceptibility, drug characteristics, and dosage. Aging may be associated with a lower risk of progressing dystonia due to decreased numbers of D2 receptors. It occurs more commonly in naive young men and is more susceptible to anti-dopaminergic agents (4).

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One of the features of acute dystonia is trismus. A condition referred to as "lockjaw" is caused by tetanic spasms of the muscles of mastication (5). As trismus may lead to permanent functional impairment, early identifying and controlling its features is so important (5). Furthermore, trismus can be caused by trauma, dental complications, infection, temporomandibular joint disease, malignancy, drug reaction, or congenital malformation (6).

Here, in this study it was introduced a 34-year-old married man from a small city in the Southeastern area of Iran who was referred to a psychiatrist because of the restriction of the range of his jaw motion (**Figure 1**).

The patient could not open his mouth within the normal range (35 to 55 mm; 3-finger wide). He felt intolerable pain and had talking problems, eating, swallowing, and was highly emotional. Three finger test was positive. He had a history of using opium (1 mg per day) and clonazepam (1 mg every night) from 10 years ago. He had a history of sudden drug withdrawal and has replaced the opium with 20 mg of methadone tablet. He had no personal or family history of other illnesses. In his neurological checkup, a painful condition restricted optimal mandibular movement caused by masticating muscle spasms.

The patient was admitted to the emergency department (Tehran, Iran), and 5 mg Biperiden lactate and 10mg Diazepam were intramuscularly administrated. The patient improved within 50 minutes, and the trismus was resolved entirely. Drugs include Tablet Biperiden 2 mg, Cap. Gabapentin 300 mg, and clonazepam 1 mg were

prescribed for him. On his next visit, the therapeutic response was suitable, and the patient's complaints were completely resolved.

In the current case, drug withdrawal could be the main cause of the problem. Although the role of benzodiazepine or opioids in acute dystonia was obvious, the emotional state can suggest a synergic effect on this condition. It should be mentioned that the patient had used opium for more than ten years and abruptly stopped using it. It could be supposed that the neurotransmitters could not be replaced simultaneously. Because he did not show a history of fever, battening or dirty sore, facial laceration, or fracture, tetanus was ruled out. In addition, he had no history of dental treatment. After examining his mental status, hysterical trismus was ruled out, and since the trismus was acute at the beginning, congenital and malignancy were not suggested. Available guidelines may help physicians to deal with these situations.



Figure 1. Dystonic reaction, Jaw lock, and Tongue protrusion; Face view (A), Trismus in the young patient; Lateral view (B).

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