

## Unilateral Mandibular Dislocation Caused by Single Oral dose of Haloperidol

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**Abstract:** Among adverse drug reactions of haloperidol Temporo-mandibular joint dislocation is a rare but serious complication. Unilateral occurrence may mimic other neurological disorders, needs many investigations and delays definitive treatment. One should always be careful in dealing with a case with history of haloperidol use in any form and suspect dislocation when there is deviation of the angle of mouth.

**Keywords:** Mandibular dislocation, Haloperidol, Dystonia

### INTRODUCTION

Haloperidol is a typical antipsychotic belonging to butyrophenone family. Acute dystonia is one of the commonest known adverse reactions of haloperidol. Although dystonic reactions are rarely life threatening, the adverse effects often cause distress for patients and families.

Dystonias are alarming and usually painful. Clinically it manifest as sudden spasm which virtually may affect any muscle but the most commonly affected muscles are eyes, mouth, jaw and neck [1,2]. It can also present as dysphasia, dysarthria and difficulty in breathing [3]. Dystonia affects both the sexes in all the age groups [4]. It is common among younger population [1,8,10] but young males are more likely to develop it[1]. 10-30 % of the patients treated with typical antipsychotics develop dystonia [5]. Out of these 10 % occur in the 1<sup>st</sup> hour and 90% in the 1<sup>st</sup> three days of drug treatment [1]. Dystonic reactions respond very well to interventions and resolve rapidly to appropriate treatment [6,7]. Prophylactic treatment with anticholinergic medications is recommended in patients less than 40 years [8].

Oromandibular dystonia is a subtype of dystonia which usually affects perioral muscles. Among dystonia Temporo-mandibular joint dislocation is one of the rare but serious complications of haloperidol treatment. Few cases of bilateral temporo-mandibular joint dislocation had been reported in patients treated with typical anti psychotics. In all the reported cases [11,12] patients were treated with either injectable

haloperidol or large dose of oral haloperidol. Here we report a case of unilateral dislocation of temporo-mandibular joint three hours after getting first oral dose (5mg) of haloperidol along with 2mg of trihexyphenidyl.

### CASE REPORT

A 20 years male was brought to the outpatient department with complains of muttering, gesticulating, inappropriate laughter hallucinatory behavior and decrease sleep ongoing for 10 days. He was diagnosed as a case of brief psychotic disorder and haloperidol 5mg bid was prescribed orally with trihexyphenidyl 2 mg b i d. Three hours after taking first dose of haloperidol (5 mg) and trihexyphenidyl (2mg) he developed pain and deviation of angle of mouth to the left. There was no history of trauma to mandible and no history of yawning leading to this. He was brought to the casualty and was diagnosed as having an acute dystonia as an adverse reaction of haloperidol. Injection promethazine 50 mg was given intramuscularly but did not get any relief .Haloperidol was stopped and Olanzapine 5mg bid was prescribed. He was admitted in the ward for detail assessment. Next day he also complained of difficulty in speaking distinctly and opening of mouth. He had difficulty in swallowing liquid and solid foods. No other abnormality detected except pain on right side of the face. Patient's general condition, hydration and all routine investigations were normal. Thyroid and parathyroid level were also within normal limit. He was sent for neurology opinion and was diagnosed as a case of atypical pain syndrome. A possibility of seizure disorder was kept and CT scan

brain and EEG were done, in which no abnormality was detected. In view of difficulty in opening mouth he was referred to Otolaryngology department where he was diagnosed as a case of right temporomandibular joint dislocation. It was reduced by closed reduction under local anaesthesia. Patient got immediate relief in symptoms. Jaw was kept immobilized for next 72 hours. On follow up patient had no complaints regarding his jaw & improved in psychotic symptoms too.

## DISCUSSION

Most commonly iatrogenic dystonia is faced by the psychiatrist[9]. Muscle spasm is a core symptom of dystonia but pain is always a presenting symptom. Antipsychotics used to treat positive psychotic symptoms are dopamine receptor blocker, specifically D<sub>2</sub> dopamine receptor[D<sub>2</sub>]. Blockade of D<sub>2</sub> in post synaptic projections of nigrostriatal dopamine pathway leads to symptoms like Parkinsonism [10]. This syndrome is associated with falling blood levels of neuroleptics. The cause for this syndrome is hypothesized as either hypo and hyper dopaminergic state in the basal ganglia[10]. Acute dystonia is usually treated by using centrally acting anticholinergic agents such as benztropine or diphenhydramine[6,7]. The concept of this treatment is based on the fact that the interaction of two neurotransmitters (dopamine and acetylcholine) are involved in the development of side effects. D<sub>2</sub> blockade by antipsychotics theoretically disrupts the ratio between acetylcholine and dopamine in the basal ganglia. Though the drugs which reduces acetylcholine, restore this ratio and eliminating the cause of the dystonia is not always successful indicates interplay of other neurochemicals in the development of acute dystonia.

This case is unique because of the occurrence of the dislocation three hours after first dose of oral haloperidol (5mg) despite prophylactic treatment of trihexyphenidyl (2mg). This case highlights that low dose of oral haloperidol causes mandibular dislocation in contrary to the reports of higher oral dose or parenteral injection causes dystonia. It also raise awareness that persistent deviation of angle of mouth with pain and unresponsive to anticholinergics and antihistaminics may mislead the diagnosis. It also creates awareness among clinician to suspect temporomandibular dislocation in a case with unilateral pain and deviation of angle of mouth with history of even low dose of antipsychotic use, which can prevent patients suffering, unnecessary investigations and delay in treatment.

## CONCLUSION

- Single dose of haloperidol can cause mandibular dislocation irrespective of the route of administration

- Deviation of the angle of mouth after taking haloperidol, not responding to anticholinergic or antihistaminics one should think of unilateral dislocation of temporomandibular joint.

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