

## Case Report

# Cervical lymphadenitis with risperidone induced cervical dystonia

Ruchitha Reddy Akkati\*

Department of Clinical Pharmacy and Pharm D, Vaagdevi College of Pharmacy, Warangal, Telangana, India

**Received:** 24 May 2019

**Revised:** 02 July 2019

**Accepted:** 03 July 2019

**\*Correspondence:**

Ruchitha Reddy Akkati,

E-mail: [ruchithareddy823@gmail.com](mailto:ruchithareddy823@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

Abiogenic cervical dystonia, the most ordinary form of adult-onset focal dystonia, is elucidated as reflex muscle contractions. Idiopathic cervical dystonia is also called as spasmodic torticollis. The most habitually obliging medications were tetrabenazine (68% of patients upgraded) and anticholinergics (39% upgraded). Clinical manifestations include spinal curvature, local pain, muscle spasm, head-neck tremor and tremor in additional body regions. Antipsychotic drugs induce persistent dystonia. Lymphadenitis particularly refers to lymphadenopathies that are kindled by inflammatory processes. Treatment for lymphadenitis is complete antibiotic course of 10-14 days. A female patient of 14 years old presented with altered sensorium and neck tightness. She was diagnosed with cervical lymphadenopathy with risperidone induced cervical dystonia. She was treated with antibiotics and the patient was relieved from her symptoms by stopping the intake of risperidone for about 2 days.

**Keywords:** Cervical lymphadenopathy, Torticollis, Risperidone

### INTRODUCTION

Cervical dystonia is expounded as involuntary muscle contractions otherwise known as torticollis. The generality of idiopathic cervical dystonia is around nine cases per 1,00,000 population. Painful stimuli are collected and managed by the basal ganglia and the synaptic changes aroused by pain may lead to unusual physiology repressed dystonia. Symptoms routinely involves pulling or drawing in the neck or an automatic twisting or jerking of the head. Torticollis is a corporeal sign, not a diagnosis. Laboratory investigation encompasses MRI of the brain and cervical spine. Anticholinergics, benzodiazepines and baclofen are the most extendedly used medication.<sup>1</sup> Anticholinergic drugs provided average improvement in 33% of patients but local intramuscular botulinum toxin injections pleased cervical dystonia, local pain or both in over 90% of totally treated patients.<sup>2</sup> The conventional high potency antipsychotics have been correlated with a greater

predominance of acute dystonias in juvenile male patients.<sup>3</sup> Antipsychotic drugs seeds persistent dystonia. Acute dystonic reactions may be due to intrusion with presynaptic dopamine receptors or there may be a discrepancy between surplus release of dopamine and simultaneous hypersensitivity of dopamine receptors. Antipsychotics mostly occupy D2 receptors and the enhanced turnover may be conveyed through over cranking of the unblocked D1 receptors.<sup>4</sup> Pathophysiological mechanisms effective in principally and completely appendicular dystonias like Oppenheim's dystonia and writer's cramp, respectively, may not be personally relevant to axial dystonias. The localized structural lesions of the CNS interconnected with secondary cervical dystonia may impart a little insight into the neural structures possibly intricate in primary cervical dystonia. Cervical dystonia related with structural lesions were most familiarly localized to the brainstem and cerebellum. Concentration of lesions in the cervical spinal cord, brainstem and cerebellum and the

relative famine of basal ganglia pathology in patients with secondary cervical dystonia prepossess that dysfunction of cerebellar afferent pathways might be vital to the primary cervical dystonia pathophysiology.<sup>5</sup> An alone Botulinum toxin injection cycle is safe and effective in the treatment of cervical dystonia and additional injection cycles sustain to work in many patients. Dysphagia, dry mouth [sore throat and voice changes/hoarseness], neck weakness are the adverse effects and these are dose dependent.<sup>6</sup> The maximum habitual adult onset focal dystonia, idiopathic cervical dystonia [ICD], is clinically presented by involuntary unilateral or bilateral contractions of head and neck musculature. The chief concept that patients with ICD have no brain structure abnormalities and thus the movement disorder is merely due to anomalous cerebral function.<sup>7</sup> Botulinum toxin injections which are being used as localized therapy has revolutionized the treatment of cervical dystonia, imparting an outrageous rate of response with a modest incidence of side effects. Although neurotoxin therapy as with oral drugs is lenitive, not sanative and regular injections are essential. In patients who ensues resistance to botulinum toxin therapy and who do not attain an appropriate comeback to or are sensitive of oral medications, surgical approaches are suitable. Amid the recourses for peripheral surgery, the considerable occurrence and utmost compatible results have been attained with selective dorsal ramisectomy. Current developments in stereostatic surgery intimate that, for high composite manifestations of cervical dystonia or when most widespread dystonia is present, globus pallidus deep brain stimulation and bilateral pallidotomy might be the treatment of option.<sup>8</sup>

Cervical lymphadenopathy is a usual problem in the pediatric age group and is chiefly inflammatory and infectious in etiology.<sup>9</sup> Frequently caused by *Staphylococcus aureus* or *Streptococcus pyogenes* infection. A complete antibiotic course of 10-14 days is normally sufficient to treat unchallenging festering lymphadenitis caused by *S. aureus* or group A *Streptococcus*.<sup>10</sup>

### CASE REPORT

A female patient of 14 years old was admitted in General Medicine department with chief complaints of unable to speak, altered sensorium, neck tightness and protrusion of tongue as shown in Figures 1 and 2. All these symptoms are seen immediately after the administration of risperidone (2 mg). Patient is a known case of hypothyroidism and intellectual deficit since 7 years and was on medication using thyronorm (100 mcg) for hypothyroidism and antipsychotics (risperidone, fluoxetine, quetiapine) for intellectual deficit. Tonsillectomy was done in 2011. On examination blood pressure was found to be 110/70 mmHg and pulse rate was found to be 88 bpm. USG report impression was cervical lymphadenopathy. Biochemical analysis was as

follows: hemoglobin: 9.0 g/dl (12-16 g/dl); blood urea: 10 mg/dl (7-20); TSH: 15.7  $\mu$ U/dl (0.35-5.5  $\mu$ U/dl). Patient was diagnosed to have cervical lymphadenitis with risperidone induced cervical dystonia and was treated with IV fluids (2 bottles NS, 1 bottle RL), Inj. Augmentin (1.2 g/iv/tid), Inj. Pantop (40 mg/iv/od), T. MVT (po/od), T. Thyronorm (100 mcg/po/od).



**Figure 1: Neck stiffness experienced by the patient.**



**Figure 2: Protrusion of tongue can be seen clearly in the patient.**

### DISCUSSION

In foregoing work it was reported that symptoms started after 3 days to 11yrs of antipsychotic therapy. In minority of patients' unforced remission transpired, but dystonia remained for years in most. The most often helpful medications were tetrabenazine and anticholinergics.<sup>11</sup> Continuous head turning, jerky movements or forced transient spasms are the manifestations of dystonia.<sup>12</sup>

Here in this case, dystonia is due to risperidone over dosing. The patient was admitted with symptoms of unable to speak, altered sensorium, neck tightness and protrusion of tongue and were seen immediately after the administration of risperidone (2 mg). As this is a case of risperidone induced cervical dystonia, no treatment was given to treat it and the symptoms of patient were relieved by stopping the administration of risperidone for about 2 days. Antibiotic (Augmentin) was prescribed to treat cervical lymphadenitis. At the time of discharge, patient was suggested to continue thyronorm (100 mcg) for hypothyroidism and antipsychotic therapy (risperidone (1 mg)) for intellectual deficit. Life style modifications like applying warm compresses, drinking plenty of fluids and managing stress levels were advised.

## CONCLUSION

Standard treatment for cervical dystonia is anticholinergics, botulinum toxin or baclofen and for lymphadenitis are antibiotics. In case of drug induced cervical dystonia stopping the administration of drug which is responsible for it results in relieve of symptoms. Here in this case, the patient was suggested to stop the administration of risperidone for 2 days and was relieved from symptoms. Augmentin was given to treat cervical lymphadenitis.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

## REFERENCES

1. William T, Robert E, Paul G, Stanley F. Current concepts on the clinical features, etiology and management of idiopathic cervical dystonia. *J Neurol.* 1998;121(4):547-60.
2. Joseph J, Stuart L, Dhyanne W, Kenneth S. Cervical dystonia Clinical findings and associated movement disorders. *Neurology.* 1991;41(7):1088.
3. Addonizio G, Alexopoulos GS. Drug-induced dystonia in young and elderly patients. *Am J Psychiatry.* 1998;145:869-71.
4. Mathews M, Gratz S, Adetunji B, George V, Mathews M, Basil B. Antipsychotic-induced movement disorders: evaluation and treatment. *Psychiatry (Edgmont).* 2005;2(3):36-41.
5. Mark S, Kimberly A. Secondary cervical dystonia associated with structural lesions of the central nervous system. *Movement disorders: J Movement Disorder Society.* 2003;18(1):60-9.
6. Joao C, Claudia C, Ana A, Joaquim F, Miguel M, Peter M, et al. Botulinum toxin type A therapy for cervical dystonia. *Cochrane Database Systematic Rev.* 2005.
7. Draganski B, Thun-Hohenstein C, Bogdhan J, May A. "Motor circuit" gray matter changes in idiopathic cervical dystonia. 2003;61(9).
8. Alder CH, Kumar R. Pharmacological and surgical options for the treatment of cervical dystonia. *Neurology.* 2000;12(5):9-14.
9. John R, Laura V. Acute, subacute and chronic cervical lymphadenitis in children. *Seminars Pedtr Surg.* 2006;15(2):99-106.
10. Timothy R, Kathryn M. Cervical lymphadenopathy and adenitis. *Pediatrics Rev.* 2000;21(12):399-405.
11. Robert E, Stanley F, Joseph J, Marsden CD, Anthony E, Stephen G, et al. Tardive dystonia Late-onset and persistent dystonia caused by antipsychotic drugs. *Neurology (Ny)* 1982;32:1335-46.
12. Jane C, Mitchell F, Stanley F. Idiopathic cervical dystonia: clinical characteristics. *Movement disorders. J Movement Disorder Society.* 1991;6(2):119-26.

**Cite this article as:** Akkati RR. Cervical lymphadenitis with risperidone induced cervical dystonia. *Int J Sci Rep* 2019;5(9):257-9.