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A Case of Acute Onset Unilateral Paralysis of Soft Palate

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Abstract

Unilateral Palsy of Palate which is acquired in nature is a rare entity, mostly affecting children. Patient usually presents with sudden onset of nasal regurgitation of fluids, rhinolalia and asymmetric movement of palate. The diagnosis is established only after exclusion of major causes such as infection, trauma, tumor, brain stem lesion etc. it is termed idiopathic when all potential causes are ruled out. The disease is usually self limiting and recovery is excellent. We report a case of twelve year old boy who presented in opd with complaints of regurgitation of fluids from unilateral nostril and nasal speech. Clinical examination was done followed by MRI brain which was unremarkable. Final diagnosis, unilateral isolated temporary idiopathic palsy of palate was established. Patient had complete recovery within ten days of tapering methyl prednisolone therapy with no residual paralysis on follow up.

Keywords: Idiopathic, Rhinolalia, Palatal palsy, Nasal regurgitation.

INTRODUCTION

Unilateral isolated palatal palsy is a rare disease usually seen in children. It was described for the first time in 1976 by Edin *et al*.[1] In literature, infection associated palatal palsy is frequently postulated but exact cause is still unclear. A case report of a 12 year old male child is described below along with an overview of available literature.

CASE REPORT

We report a case of a 12 year old male child who was examined in ENT OPD of Civil Hospital Panchkula, which is a secondary care hospital in the State of Haryana in India. The child presented with complaints of regurgitation of fluids from nose and rhinolalia for 2 days. The symptoms were sudden in onset, painless and non-progressive. The child denied any history of fever, headache or skin rashes. There were no complaints of hoarseness, difficulty in swallowing, loss of sense of taste or loss of hearing. Child was completely immunised.

During local examination of throat, no membrane was seen. On phonation, uvula deviated towards right side. Gag reflex, though present was weak on left side. All cranial nerves were examined and no other cranial nerve palsy was noted. Rest of the clinical and neurological examination was unremarkable.

On laryngoscopy, vocal cord movement was found normal. Laboratory investigations were normal.

Serological tests including tests for syphilis, HIV and hepatitis were negative. CSF examination was normal. MRI of the brain revealed no abnormalities. There was no intracranial SOL, no brainstem lesion.

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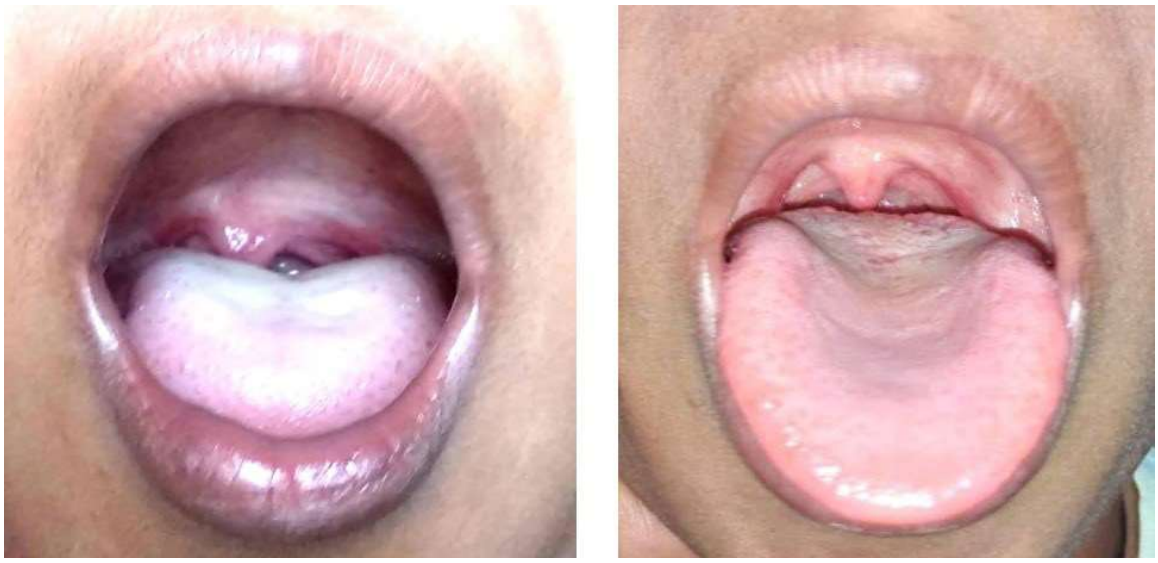

Fig. 1: A. Initial examination reveals: Uvula deviated towards right side on phonation, B. Follow up examination reveals: near midline uvula with no significant deviation

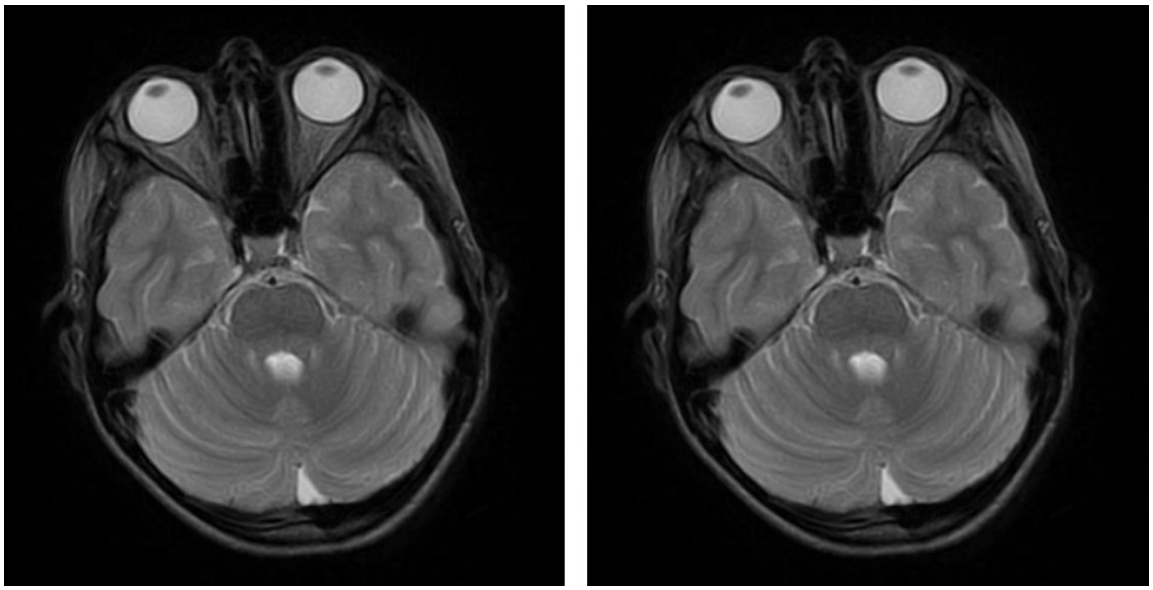

Fig. 2: MRI: reveals no intracranial lesion, normal appearance of pons and medulla

Patient was treated with 1 mg/kg/day oral methyl Prednisolone for 5 days followed by 0.5 mg/kg/day for another 5 days. Patient showed signs of improvement on 3rd day and completely recovered by 10th day. Patient remained asymptomatic during follow up at 3 months. Patient was on regular follow up visits every three months for a period of two years and no relapse or recurrence was seen.

DISCUSSION

Isolated palatal palsy is a rare disease. Acquired isolated palsy of palate is rare, which mostly affects young males.[2] Very few cases have been reported of acquired isolated palsy. In a systemic review of literature from 1960-2012 only 36 such cases have been reported[9]. Mostly, it presents with rhinolalia and regurgitation of fluids from nose with varying degree of dysphagia.

The etiology and pathogenesis of disease is still not clear. To explain the etiology, two mechanisms have been postulated, which are infection (mostly viral) and vascular (ischemia).[3]

An infection/post infective neuropathy can cause isolated palatal palsy. According to Lapresle et al ischemia of roots of glossopharyngeal and vagus

nerve would lead to lower motor neuropathy which manifests as palatopharyngeal incompetence.[4] The cause of ischemia is not known. Isolated palatal palsy is considered idiopathic only after major causes are ruled out; such as trauma (adenoidectomy or craniofacial trauma), postinfection (diphtheria, polio, etc.), neuromuscular disorder (Guillain-Barre syndrome or motor neuron disease), craniovessel (internal carotid aneurysm) or disease affecting brainstem nuclei.[5,6]

Sporadic reports of palatopharyngeal palsy which were seen as a result of infection due to viruses such as Herpes, Varicella, Hepatitis A, Rubeola, Epstein-Barr virus, Parvovirus B-19 have been reported.[5,6,7,8] Clinical features of diphtheria were not present in our case and also the patient was completely immunized. In our case, viral cause could not be demonstrated. Mucous membrane of pharynx and muscles of pharynx and soft palate are supplied by pharyngeal branch of vagus nerve. Therefore, weakness of this nerve will result in dysphagia, but nasal regurgitation of fluids and rhinolalia are attributed to palatal weakness as is seen in our case. Any lesion involving pharyngeal branch of vagus nerve or pharyngeal nerve will, hence result in pharyngeal and palatal weakness.[3] To understand the isolated involvement of palate we need to understand the somatotrophic organization of vagus nerve and brainstem nuclei.[9] Therefore, cerebral MRI is a must to exclude ischemia or demyelinating disease of brain.

CONCLUSION

This disease is usually self-limiting with excellent prognosis. The sign and symptoms of the patient improved and the child completely recovered without any residual weakness. The patient responded to steroid therapy with complete recovery. Given the benign and self-resolving nature of idiopathic palatal palsy, invasive tests should best be avoided and more such case reports would further help in confirming the idiopathic and self-limiting nature of the disease. It is further emphasized that this case was diagnosed and treated in a secondary care hospital and the patient had complete recovery with no recurrence. It is hence concluded that more such case reports would be useful to confirm benign nature of this disease so as to aid in treatment of such cases even at secondary care government hospitals with basic laboratory and imaging facilities.

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