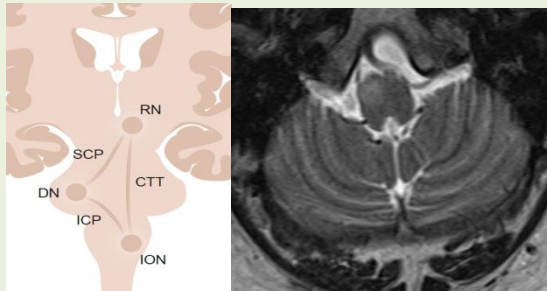


Introduction

- Oculopalatal tremor (OPT) is caused by lesions involving the Guillain-Mollaret triangle
- Hypersynchronized oscillations in the inferior olive leads to aberrant cerebellar output and rhythmic ocular and palatal movements



- Patients with lesional OPT may develop concurrent dystonia due to abnormal cerebellar outflow, a syndrome termed oculopalatal tremor plus dystonia (OPTD)(1)
- Deep brain stimulation (DBS) targetting the globus pallidus internus (GPi) has been widely used to treat dystonia but not in the setting of OPTD

Case 1

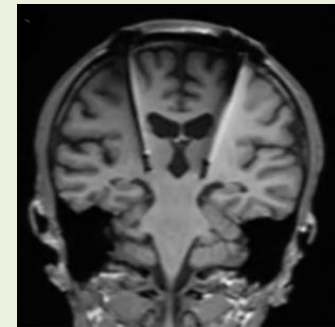
- 61 year old man with a history of multifocal strokes developed oscillopsia
- Exam showed OPT and a moderate degree of truncal, laryngeal, cervical, and limb dystonia
- MRI demonstrated right olivary hypertrophy, putatively due to a brainstem infarct
- Following GPi DBS his dystonia improved significantly
- Global Dystonia Severity Rating Scale (GDS) improved from 16 pre-operatively to 10 post-operatively

Case 2

- A 56 year old woman with a history of bilateral cerebellar infarcts later developed dystonic movements of the face, upper trunk, and left arm
- She was found to have OPT
- Following DBS she had marked improvement of her dystonia
- GDS improved from 25 pre-operatively to 8 post-operatively

Discussion

- Dystonia is thought to result from disruption of a network involving the cerebellum and basal ganglia
- It has been hypothesized that an aberrant cerebellar output predisposes OPT patients to developing dystonia
- Two patients with OPTD who underwent GPi DBS had success in treating their dystonia
- There was no change in their oculopalatal oscillations
- We postulate that the GPi stimulation may reduce this hyperactive cerebellar output by indirect modulation of the dentate-thalamo-cortical pathway.



References

1. Shaikh AG, Ghasia FF, DeLong MR, Jinnah HA, Freeman A, Factor SA. Ocular palatal tremor plus dystonia - new syndromic association. Movement disorders clinical practice. 2015;2(3):267-70. Epub 2015/06/17. doi: 10.1002/mdc3.12193. PubMed PMID: 26889496.