

Endoscopic Trans orbital excision of osteoma causing proptosis and hypoglobus

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Abstract

Frontal osteoma is a benign bony tumour that can cause symptoms due to pressure on adjacent structures.

We present a case of 56 year old lady presenting with worsening proptosis, hypoglobus and visual disturbance due to a large frontal osteoma, compressing orbital contents.

Endoscopic trans orbital access via superior eyelid incision provides an excellent surgical corridor to decompress symptomatic part of tumour with good visual outcomes.

Introduction

Frontal sinus osteomas is a slow growing, benign bony tumour, most commonly found in the paranasal sinuses. Most remain asymptomatic and are picked up incidentally. Larger tumours can cause forehead swelling, headaches, sinusitis or visual problems. Surgical resection is typically required for symptomatic relief.

Most osteoma rise from frontal sinus but can involve multiple sinuses. Although majority of these remain asymptomatic, some can cause symptoms due to pressure on adjacent structures. Rarely, these can extend into orbit, causing diplopia, proptosis and visual changes. These can also extend cranially to cause CSF leak and meningitis.

These are easily diagnosed on CT scan with typical hyperdense, well defined appearance of a bony mass. There could be many factors associated with the formation of such osteomas which include congenital, traumatic, inflammatory or associated with syndromes such as Gardner Syndrome.

Case Report

We present a 56 year old lady who presented with gradual onset, progressive diplopia of over 1 year duration resulting in eye being pushed forward and downwards. She had double vision due to restricted eye movements and increased tearing from the affected eye. She had partial ptosis at presentation and was unable to continue her job as a teacher due to cosmetic disfigurement.

Her CT scan showed a large osteoma arising from frontal sinus, extending into ethmoid air cells and also to left orbit, compressing her globe which was pushed forwards and downwards. Her visual acuity remained 6/6 on both sides.

She did not wish a big craniotomy procedure. Hence she was offered a targeted resection of orbital component of osteoma via endoscopic trans orbital route, through superior eye lid crease incision.

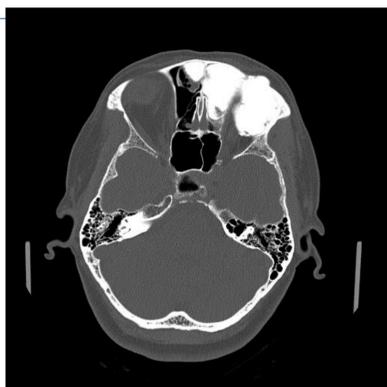


Figure 1. Pre op CT scan

Surgical technique

A superior eye lid crease incision was fashioned to approach orbital contents. Endoscopic trans orbital route was then utilized to drill off the osteoma extending into orbit. Once orbital volume was restored, remaining osteoma in frontal sinus was left. Endoscope provided a direct view inside the orbit to maximise extent of bone resection and to ensure adequate orbital volume and contour was restored.



Figure 2. Pre op CT, 3D reconstruction

Surgical outcome

The patient recovered from the procedure well and was discharged post operative day 2. Her ptosis worsened initially but was improved on follow up visit to clinic in 6 weeks time. Her proptosis was immediately resolved and her visual acuity remained 6/6. Her extra ocular eye movements were restored to full range of motion but diplopia on looking upwards persisted only on extreme upward gaze.

Post operative imaging confirmed adequate bone decompression with restoration of orbital volumes.



Figure 3. Post op CT Scan 3D reconstruction

Conclusions

Endoscopic Transorbital route provides an excellent minimally invasive surgical corridor to treat symptomatic frontal osteoma presenting with orbital content compression. It is a safe method to achieve symptomatic control with early post operative recovery for patients.

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