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# INTRAORAL SUBLABIAL APPROACH FOR GIANT CELL REPARATIVE GRANULOMA OF THE LEFT ORBIT IN A 3 YEAR MALE CHILD.

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**ABSTRACT** We report a case of giant cell reparative granuloma of the orbit in a three year old male child and discuss its surgical approach. A 3-year-old male child presented to us with painless proptosis of the left eye. Magnetic resonance imaging demonstrated an intraosseous cystic orbital mass. Intraoral sublabial approach was used for complete excision of the lesion. At two years follow up, he has normal vision with no signs of recurrence.

**KEYWORDS :** Giant cell reparative grannuloma; orbit; Intraoral; sublabial approach

## INTRODUCTION

Giant cell reparative granuloma (GCRG) is a rare benign fibro-osseous lesion affecting facialbonesespecially mandible and maxilla.[1] Although, the aetiology of this rare lesion is far fromclear, reactiveresponse to intraosseous haemorrhage has been favoured as most likely casue.[1]On reviewing Englishlanguage literature, only few reports describing its occurrence in the orbitcan be seen.[2,3] We report acase of GCRG arising in the left orbit causing painless proptosis in a 3-year-old male child. Intraoralsublabial approach was used to completely excise the lesion to avoid any scar or cosmetic deformity ofthe face. We also review the pertinent literature regarding management of this controversial lesion.

## CASE REPORT

A 3-year-old male patient presented to our department of head and neck surgery with painless progressive proptosis of the left eye of three months duration (Figure1). It was not associated with nasaldischarge nor was there any history of trauma or significant paranasal sinus infections in the past. Clinicalexamination did not reveal any mass in the nasal cavity, or any palpable mass in the cheek substance. Laboratory studies including complete blood count, biochemical studies like serum calcium, parathyroidhormone, phosphate, alkaline phosphatase, were all within the normal limits. He underwent MR imagingstudies of the orbit and paranasal. Coronal T1-weighted MR image demonstrates a heterogeneous massinvolving left orbit with predominately low T1 signal intensity with internal septa (Figure 2).

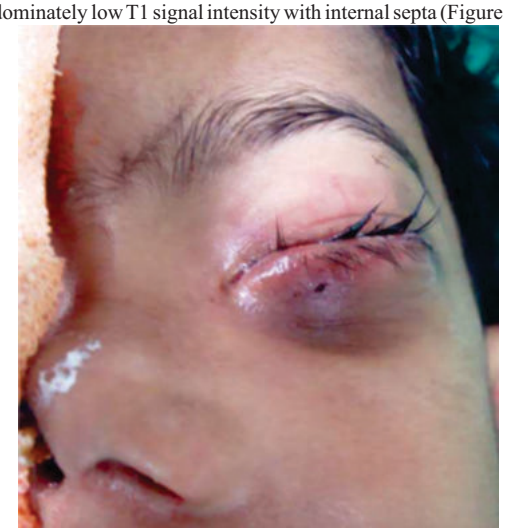

**Figure 1.** Clinical Picture Showing Proptosis Left Eye.

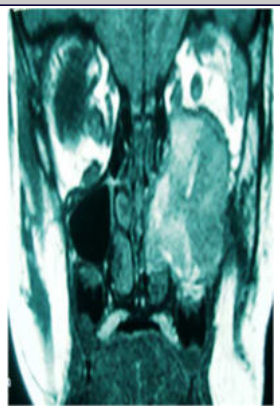

**Figure 2.** Coronal T1-weighted MR image demonstrates a heterogeneous but predominately lowT1 signal intensity with internal septa involving left orbit.

**Contrast-**

enhanced sagittal T1-weighted MR image of left orbit demonstrates peripheral, septal, and soft tissuecomponent enhancement on gadolinium administration (Figure3).Orbital biopsy was performed whichwas consistent with GCRG. To completely excise the mass from the orbit, intraoral sublabial approachwas used to access the mass to avoid any external scar. Histopathology of the specimen revealed agranulomatous lesion with reactive giant cells on a background stroma of plump spindle-shapedfibroblasts. The pathologic diagnosis was GCRG was made. The patient is free of recurrence at 3 years follow-up, and is being regularly followed in our clinic (Figure 4).

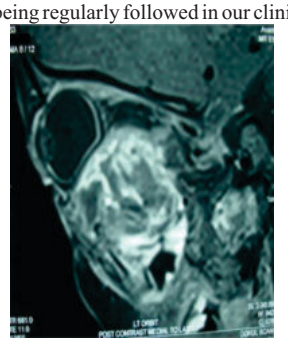

**Figure 3.** Contrast-enhanced sagittal T1-weighted MR image of left orbit demonstrates peripheral, septal, and soft tissue component enhancement.

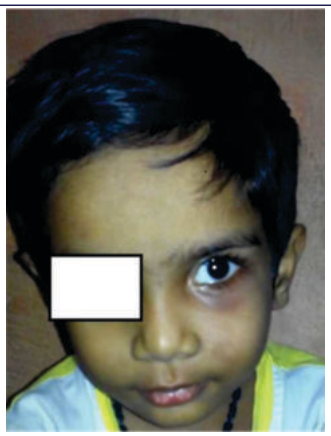

**Figure 4 .** Clinical Picture After 3 Years Of Follow Up.

## DISCUSSION

Complete surgical excision rather than simple curettage is recommended treatment for GCRG, ascurettage is associated with higher rate of recurrence.[4] Surgical approach for GCRG affecting orbit inpaediatric age group is of concern as it may result in deformity in the developing dentition or poorcosmesis. Several non-surgical methods have been proposed to treat GCRG, including radiotherapy,[5]systemic calcitonin,[6] intralesional corticosteroids injection[7] and systemic α interferon.[8] Among these nonsurgicaltreatment methods, intralesional corticosteroid injection has shown promising results and canlead to a complete resolution of the lesion or a significant reduction in size, allowing a more conservativesurgery.[7] We used intraoral sublabial approach for complete excision of the lesion, to avoid disfiguringscar on the face.Radiotherapy is contraindicated because of the potential for sarcomatous transformation that has beenreported.[9] Since there was not significant soft tissue extension and the lesion was close to the vitalstructures like orbit and optic nerve, we opted for surgical procedure and could completely remove thelesion. Now three years after the surgical resection patient has no symptom or signs to suggest recurrence.GCRG is a rare and benign fibro osseous lesion; therefore, definitive diagnosis will avoid mutilating radicalsurgery. Complete excision is preferred and should be done whenever possible as it decreases thechances of recurrence. For extensive or recurrent lesions involving surrounding soft tissues, treatmentwith intra-lesional injections of steroids can be useful in at least decreasing the size. More prospectivecontrolled studies should be encouraged to find standard of care.

## CONCLUSION

Intraoral sublabial approach is very useful in dealing with orbital and paranasal sinus lesion in pediatricage group. Not only it gives wide access, but also avoids external scar on face hence highly cosmetic.

Authors' Contributions AHH wrote the draft of the article. AHH, HJ, NIand UJ helped in the final writing ofthe manuscript and gave final approval of the article.

All authors read and approved the final manuscript.

Compliance with Ethical Standards

**Competing Interests:** The authors declare that they have no competing interests.

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**Consent:** The informed consent was obtained from the patient for the publication of this report and anyaccompanying images.

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