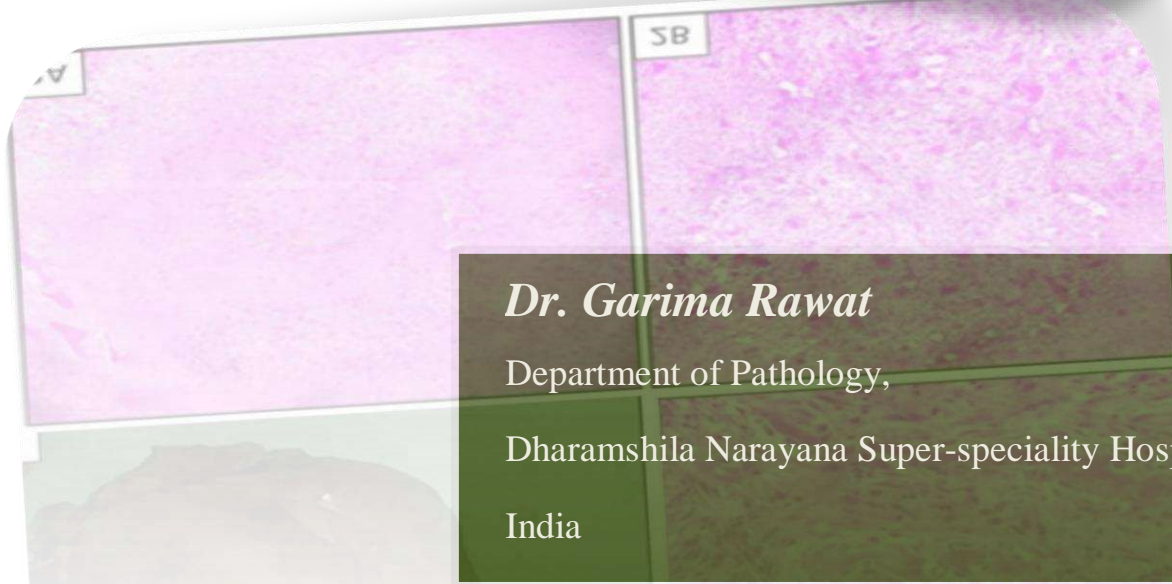
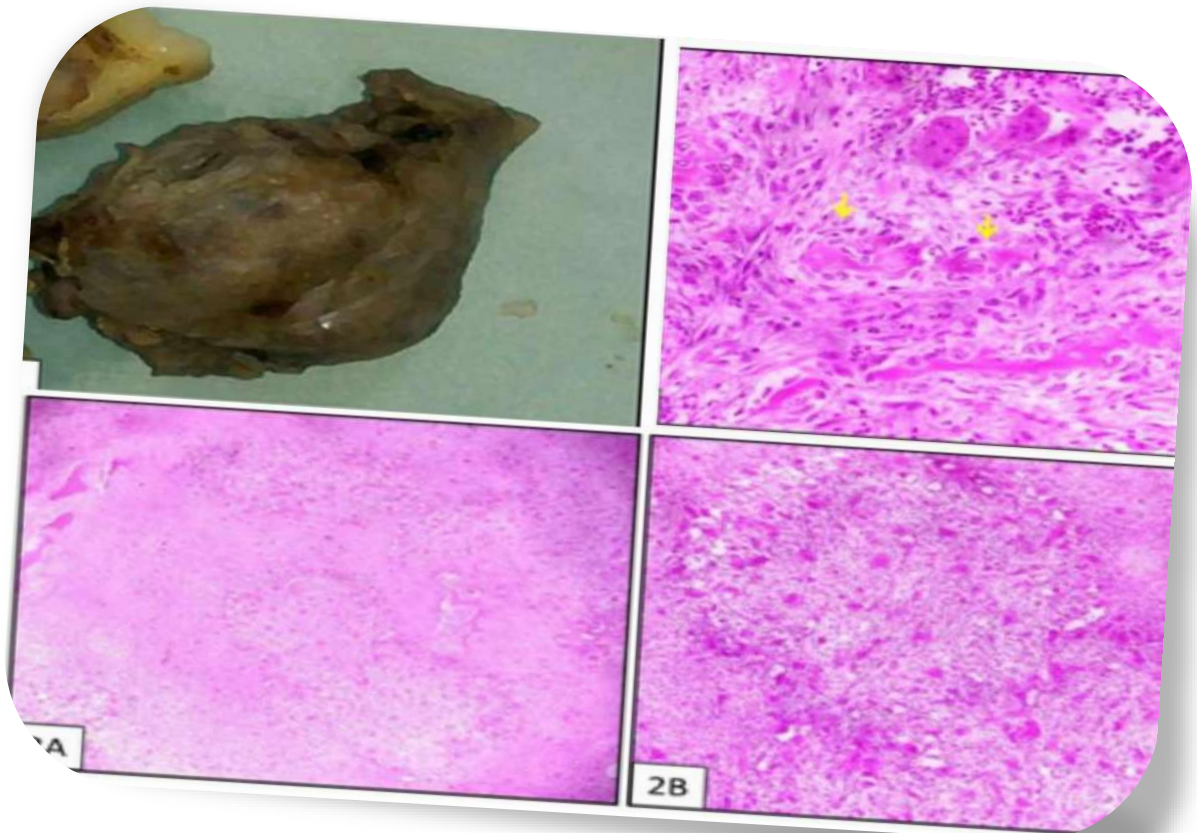


Clinical Image

Central Giant Cell Granuloma of Mandible



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Central Giant Cell Granuloma of Mandible

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Clinical Image

Central Giant Cell Granulomas (CGCG) is uncommon benign intraosseous lesions. They are also referred to as giant cell reparative granulomas. These lesions were first described by Jaffe in 1953. The exact etiopathogenesis is not known but many theories have been proposed. The most accepted mechanisms include reactive nature, developmental anomaly, or benign neoplasm. Neville, consider this entity to be a non-neoplastic lesion and the World Health Organization (WHO) also classifies it as a bone-related lesion and not a tumour, although its clinical behaviour and radiographic features often are those associated with a benign tumour. The giant cells in these lesions arise from the fusion of non-replicating monocytes or from the mitotic and amitotic division of monocyte nuclei in the absence of cellular division (failed cytokinesis).

CGCG is encountered commonly in young females in anterior mandible. The case being presented here shows CGCG in posterior mandible of a young male.

The histopathological picture shows numerous osteoclast-like giant cells near hemorrhagic areas, cellular vascular and fibrous stroma along with new bone formation at edge of lesion. Frequently mitotic figures can be observed (Figure 1-3). Similar features were observed in the histopathological sections of the present case. Along with that an interesting finding of cannibalism was also noted at areas. The giant cells showed partial cannibalism by formation of pseudopod around the mononuclear Stromal cells. At the interface of the mononuclear cell and the cell membrane of GC, a small concavity on the cell membrane of GC could be seen. Other types that can be observed are complete and complex cannibalism by giant cells.

The commonly used treatment modality is curettage or surgical resection with 0.5 cm to 1 cm margin. The usual recurrence rate ranges from 11% to 35% which is lowest when surgical intervention is performed. Other non-surgical interventions are Intralesional corticosteroids, Calcitonin and Interferon alpha-2a therapy; although, higher recurrence rates have been reported with these treatment options. In the current case being discussed, surgical resection i.e. segmental mandibulectomy was performed. Patient has been on follow up for last 2 years and no recurrence has been reported yet.



Figure 1: Gross picture of resected specimen.

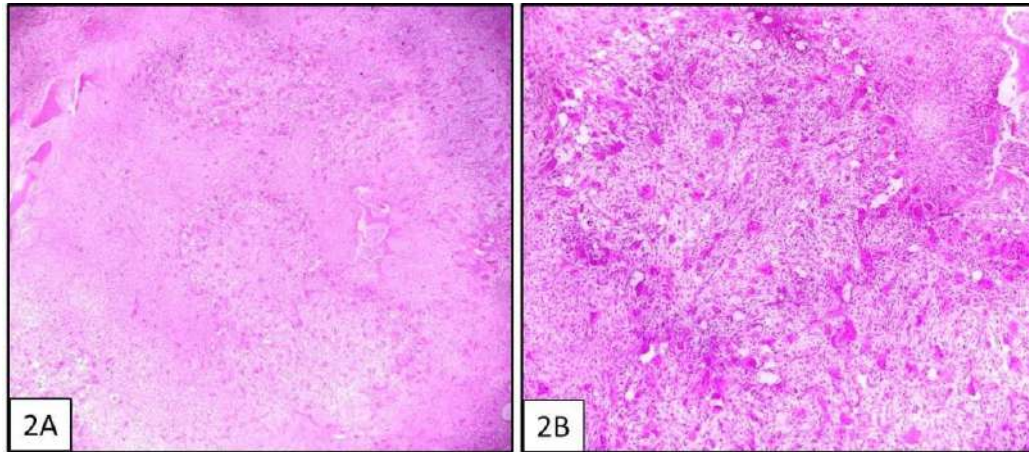


Figure 2: 2A. Photomicrograph showing highly cellular vascular stroma with numerous giant cells (HE-40x). 2B. Photomicrograph showing osteoclast like giant cells near haemorrhagic areas (HE-100x).

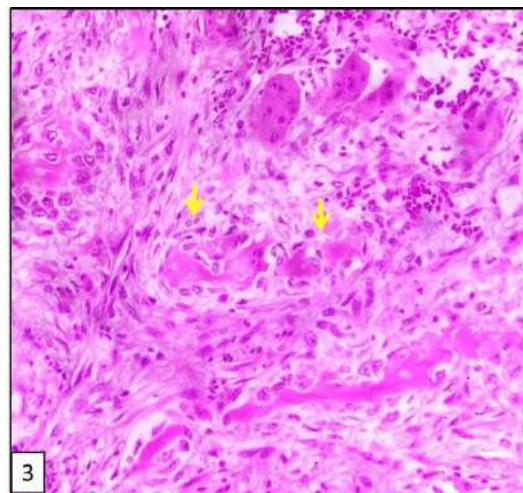


Figure 3: Photomicrograph showing cannibalistic giant cells (yellow arrow) (HE-400x).

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