

# Cytopathological Study Of Giant Cell Tumours Of Hand And Feet-A Series Of 15 Cases

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## Introduction

Giant cell tumour(GCTs) are benign tumors commonly seen in long bones such as humerus ,Tibia,Femur,these are 4-5% of primary bone tumours but usually rare in bones of hand and feet( 1-5% of all giant cell tumours.Unni<sup>[1]</sup> reports incidence of 1.7% in hand and 1.2% in foot.Mirra et al <sup>[2]</sup> reports an incidence of < 4% in hand and < 2% in foot.Huvos <sup>[3]</sup> reports an incidence of 3.7% in hand and 1.8% in foot. Most common age of presentation is between 30 and 50 years<sup>[4]</sup>.Here small bones tumours carries higher risk for local recurrence and metastasis<sup>[5]</sup>. The purpose of this study was to investigate and report cytopathological study of giant cell tumours of small bones.

## Material and methods

The study consists of series of 15 cases referred from Orthopedic Department presenting with unilateral pain(mostly) and well-defined swelling of small bones which was firm,fixed,approximately 1.5x1cm in size. FNAC done in all cases in the department of pathology in UPUMS,Saifai between the year 2017-2020.FNAC was done with 22 Gauge needle using 10 ml syringe taking aseptic precaution . Two pass taken and blood mixed material was aspirated. Slides for MGG and for PAP staining were prepared for cytological examination and paraffin block was prepared for histological Examination.

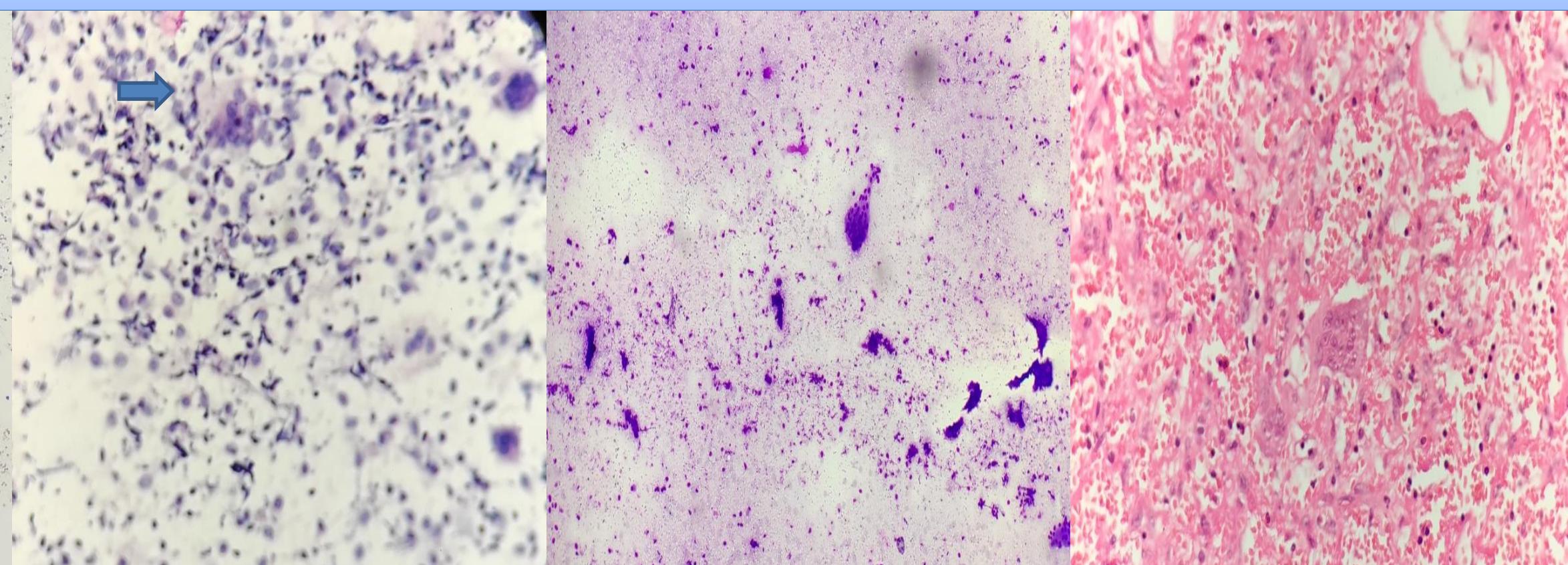
## Result

Most of the patient were 20 to 40 years.M:F ratio was 7:8.Most common presentation was pain at site(8 cases),swelling(4 cases), swelling with pain(3 cases).Most commonly involved small bones of hand mainly metacarpal bones were affected. Cytologically all these were diagnosed as GCT of respective bones.On histopathological examination all cases were confirmed as GCT.

**On Cytological Examination:** Microscopy shows mononuclear spindle cells in cohesive clusters as well as arranged singly alongwith multinucleated giant cells containing numerous uniform nuclei against necrotic background.

Provisional diagnosis was given Giant Cell Tumour. Biopsy was advised for confirmation.

**On Histopathological Examination:** Grossly tissue were firm in consistency, grey-brown in colour.Microscopically, many multinucleated giant cells containing discrete nuclei grouped together within the cytoplasm were seen.



Giant cell(MGG,40 X)

Giant cell(MGG,40 X)

Giant cell(PAP,40 X)

Giant cell (H&E,40 X)

## Discussion

Coopers and Travers has given the description of this tumour<sup>[6]</sup> later which was named as Giant Cell Tumour.Most common age in our study was between 20 to 40 years which was also observed in Biscaglia et al. study.GCT usually seen over 20 years of age . In our study,tumour involved the hands which was also observed in Biscaglia et al. Pain and swelling were common findings as seen in Michiro Yanagisawa et al. study. Although GCT are benign but they are more aggressive when affect the hand as compared to foot bones.

## Conclusion

GCT were seen in bones of hand and feet which is rare site for this tumors .So, it is necessary to carefully examine all the FNAC smear for diagnosis of GCT to provide better treatment and beneficial prognosis.

## References

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