



**A RARE CYTOLOGICAL PRESENTATION OF MALIGNANT MELANOMA IN A  
YOUNG MALE – A CASE REPORT**

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**ABSTRACT**

Malignant melanoma present with diverse morphological presentations. However melanoma with osteoclast like giant cells is rarely reported and has an aggressive behavior. We are reporting this case of young male who presented with metastatic malignant melanoma with osteoclast like giant cells. Fine needle aspiration cytology was done and further the primary from anal canal was diagnosed. The significance of this finding is also discussed.

**KEYWORDS:** Osteoclast like giant cells, malignant melanoma, young male.

**INTRODUCTION**

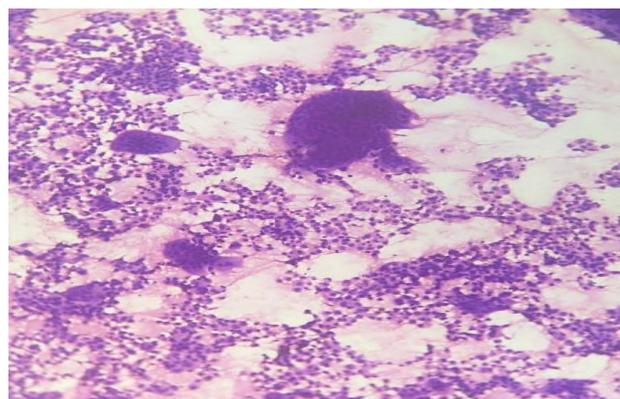
Malignant melanoma present with diverse morphological presentations. Osteoclast like giant cells (OGCs) are seen in many malignant tumors involving bone, lung, breast, kidney, pancreas, liver and its association with malignant melanoma is an uncommon morphological phenomenon with few reported cases in literature. We are reporting a case of a 26 year old male who presented with metastatic malignant melanoma with osteoclast like giant cells and discussing its significance.

**CASE REPORT**

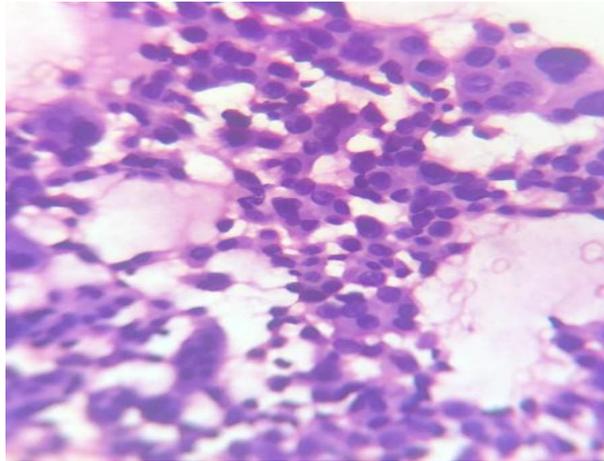
A 26 year old male presented with multiple masses in left inguinal region and inner aspect of left gluteal region which is rapidly increasing in size for the past two months. No history of fever, pain, loss of weight and productive cough. No altered bowel habits or bleeding

per rectum. Ultrasound examination was reported as ? Tuberculous abscess ? Sarcoma.

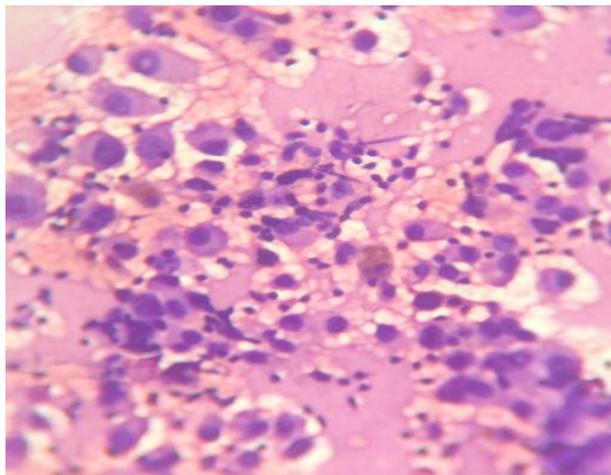
Fine needle aspiration cytology (FNAC) was done from the left inguinal mass and inner aspect gluteal mass which measured about 5x3cm in size each. Smears from both regions were cellular showing single scattered and groups of neoplastic cells with abundant eosinophilic cytoplasm and atypical nuclei, few showing binucleation and intranuclear inclusion. Numerous multinucleated OGCs along with intracytoplasmic and extracellular brownish melanin pigmentation(Figure1,2,3,4). Nuclei of OGCs were monomorphic with oval morphology and numbered from 5 to more than 100 in number. Final report of FNAC was given as metastatic deposits from malignant melanoma. Colonoscopy revealed growth in anal canal measuring 3x2.5cm and histopathological examination proved to be malignant melanoma.



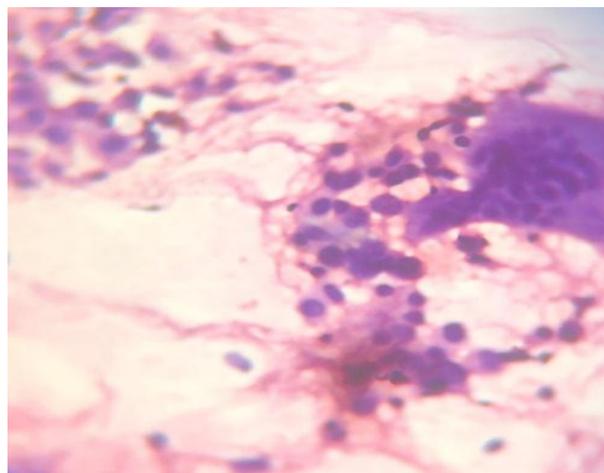
**Figure 1: FNAC smear showing metastatic deposits of malignant melanoma with osteoclast like giant cells. H&E 40x.**



**Figure 2: FNAC smear showing singly scattered cells with abundant eosinophilic cytoplasm and atypical nuclei. H&E 100x.**



**Figure 3: Tumor cells showing intranuclear inclusion and intracytoplasmic melanin pigmentation. H&E 100x.**



**Figure 4: Tumor cells showing extracellular melanin pigmentation and osteoclast giant cells. H&E 100x.**

#### **DISCUSSION**

Malignant melanoma presents with various histologic variants such as superficial spreading, lentiginous, acral lentiginous, nodular, desmoplastic, neurotropic, signet ring cell, balloon cell and rhabdoid melanoma.<sup>[1]</sup> Malignant melanoma with OGCs is a rare morphological pattern with few cases reported in literature<sup>[2-8]</sup> and hence

it can be confused with histiocytic tumors and bone tumors.

OGCs, neither their origin nor function is well understood so far. They are considered to be reactive cells derived from monocyte or macrophage which express CD68 but not melanocytic markers (HMB-45, Melan-A, and S100) by some studies.<sup>[9]</sup> However recent

studies suggest OGCs showing positivity for HMB-45, Melan-A and S100 in addition to CD68 suggesting that they are transformed neoplastic cells.<sup>[9,10]</sup>

The prognostic significance because of the presence of OGCs in malignant melanoma is of concern. So far in the reported cases, all behaves in an aggressive fashion, few with distant metastasis.<sup>[4,6,7,8]</sup> It seems that OGCs developed either due to overexpression of osteoclast upregulating genes or transformation of tumor associated macrophages, both accelerates degradation of extracellular matrix and favours distant spread of melanoma cells.

### CONCLUSION

Malignant melanoma with osteoclast like giant cells is to be viewed with concern because of two main reasons. One is, the aggressive behavior with this pattern and targeted therapy may be given to the patient. Other is, it may cause misdiagnosis of histiocytic tumors or bone tumors. Hence mentioning of this cytological finding in the report is of great importance.

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