Conclusion- GCTs of the skull are rare.Imaging diagnosis is often challenging, but the combined use of CT and MRI can be useful for characterisation and extent evaluation. Diagnosis ultimately relies on histological analysis for most patients. The prognosis for axial GCTs is poorer than for appendicular lesions due to difficulties in complete surgical removal, although adjunctive radiotherapy and medical therapy may prove useful in the future.

A CYTOLOGICAL STUDY OF CHORDOMA

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ABSTRACT

Chordoma is a rare malignant tumor of notochord origin that occurs along the spinal axis. in cytology department a case of mass on glyutial regoin report which is unusual. On fine needle aspiration cytology of the lesion, tumor showed varied but characteristic diagnostic morphological features. There is study of multiple parameters of cytological study with correlation of radiological finding. Cytomorphological features of chordoma allow accurate diagnosed by fine needle aspiration cytology. Features associated with increased pleomorphism of physaliphorous cells and may include nuclear inclusion, bi or multinucleation and rarely mitotic figures

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INTRODUCTION

Chordoma which arise from remnants of the notochord, is a rare bone tumour that accounts for up to 4% of the primary bone sarcomas. Chondroma is most common in the sixth and seventh decades and is very rare under the age of 30. Chordoma arise in the axial spine, sacrum is the most common site ,followed by the spheno-occipital area, cervical spine and thoraco lumbar spine. Cytomorphological features of chondromaallow accurate diagnosis by FNAB.

case report

A patient of 60 year old male has a painless lump on right side of gluteal region since 12 month without any complaints. Swelling was 2*2 cm in size Non tender non mottile and firm to hard in consistency overlying skin is normal.

CT shows a heterogenous hyperdence lobulated mass in the sacrococcygeal region with intraspinal extension.

USG guided FNAC of right gluteal side done and smear showssmall clumps of well dispered atypical cell having vacuolated cytoplasm central prominent nuclie,binucleated and multin ucleatedcells also seen .in background fibrillary myxoid material seen. Finding of chordoma.

DISCUSSION

Chordomas are locally aggressive rare malignant tumours originating from embryonic notochord vestiges that account for 1-4% of all primary malignant bone tumors, out of which maximum cases are seen in the sacrococcygeal region (50%) followed by sphenooccipital region(35%) and rest in vertebral region (15%). 1 Incidence estimated annually is around 0.1% per 1 lakh population.

On cytopathology, though conventional chordomas are easy to diagnose because of presence of typical physaliphorous in a background of abundant myxoid matrix, diagnosis of chordoma is very tricky because of simulation with other tumors like chondrosarcomas, chondromas and chordoid meningiomas.

In chordoma mixture of both chordoid and chondroid cells are seen. Frequently epithelial cells and bimulti nucleated cells are also noted, as was seen in this case. In chondromas, few free lying monomorphic cells with indistinct cell borders and weakly stained cell nuclei are seen lying within lacunary structures in a background of purplish thick myxoid material. Chondrosarcomas show cells which are pleomorphic, hyperchromatic and have multiple prominent nuclei, the cells may be vacuolated but rarely present with the large cytoplasmic vacuoles as seen in chordoma where it is a characteristic feature. 14 Chordroid meningiomas contain cords of polygonal tumor cells with bland nuclei, nuclear pseudoinclusions and vacuolated eosinophilic to clear cytoplasm resembling physaliphorous cells in mucin rich stroma (myxoid stroma). However, occasional loose pink purple cells without cytoplasmic vacuoles and admixed lymphoplasmacytic infiltrates are helpful identifying features. With the help of Immunohistochemistry [IHC], these close differentials can be distinguished with high degree of certainity. IHC demonstrates that tumor cells of chordoma are reactive to epithelial markers like Epithelial Marker Antigen (EMA) and Cytokeratins (CKs) especially CK 8 and CK 19, whereas Chondromas and Chondrosarcomas are negative for CKs and EMA and are positive for Vimentin. Chordoid meningiomas are positive for EMA and variably positive for S100 protein but negative for cytokeratins.

Conclusion

FNAB of the mass yielded blood stained material. The smears were highly cellular and showed classic physaliphorous cells in small groups and many isolated cells in fibrillary myxoid background. The cells were large, round with one or two centrally placed small round nuclei, fine chromatin network, prominent nucleoli and abundant clear bubbly cytoplasm . Many small round epithelial cells with small round nuclei and scanty basophilic cytoplasm were also present. A diagnosis of chordoma was made on the basis of physaliphorous cells in fibromixoid background.