A TALE OF TWO OSTEOSARCOMA VARIANTS

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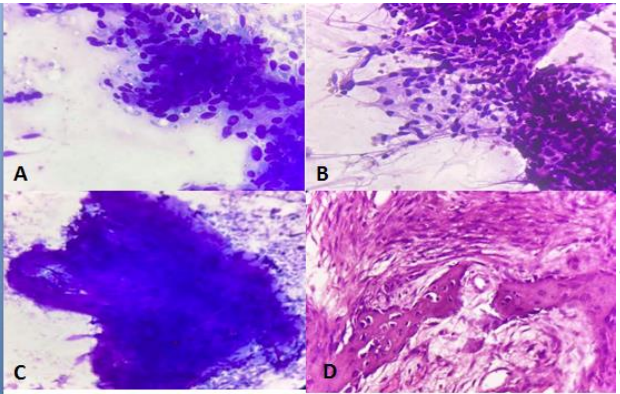
BACKGROUND

- Osteosarcoma (OS) is the most common primary malignancy of bone .
- OS incidence is distributed bimodally across age, first peak between 10 to14 years and a smaller second peak after the age of 60 years.
- Being a vivid mimicker, OS may pose diagnostic challenge especially when coupled with atypical radiologic presentation, which is described in 20% of cases.

CASES HISTORY

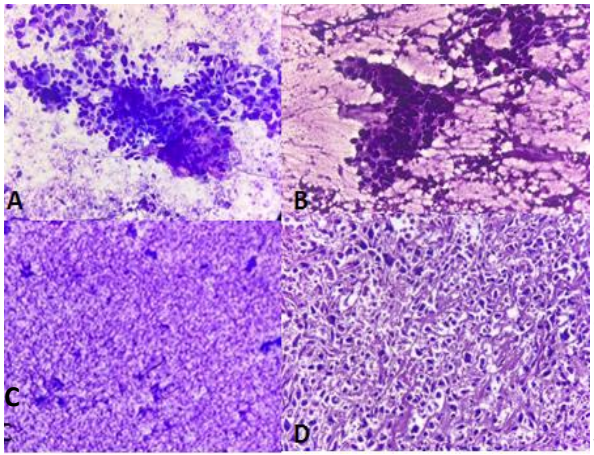
Case 1: A 75 years old male presented with complaints of severe pain in right leg for 2 years . Radiology was suggestive of OS, lower end femur. It was diagnosed as Fibroblastic Osteosarcoma.

Case 2: A 60 years old male presented with complaints of severe pain in left leg for 2 years with progressive weight loss. Radiology was suggestive of OS in upper end tibia. It was diagnosed as Osteoblastic osteosarcoma.



CASE 1

Figure A: Smears showed moderately pleomorphic ovoid to spindled hyperchromatic cells with inconspicous nucleoli and amphophilic moderate cytoplasm (MGG. 40x).
Figure B: Smears show similar morphology of cells in a dense fibrillary background.(H&E 40x)
Figure C: : Tumor cells embedded in amorphous osteoid Matrix (MGG. 40x).
Figure D: HPE section showing mildly pleomorphic spindle cells with high N:C ratio and scant cytoplasm with neoplastic osteoid. (H &E 40x).



CASE 2

Figure A: : Smears showing Moderately pleomorphic round to ovoid hyperchromatic cells with inconspicous nucleoli and scant cytoplasm. (MGG. 40x).
Figure B: Similar cells with dense eosinophilic material [osteoid] (H&E40x)
Figure C: Tumour cells in an abundant necrotic background.(MGG 10x).
Figure D:HPE section showing scattered pleomorphic osteoblasts admixed with lacy osteoid . (H &E 40x).

CONCLUSION

- Bizarre tumor cell morphology and divergent differentiation are common in OS leading to quite variable cytology.
- Evidence of neoplastic osteoid by malignant stromal cells should be thoroughly searched for.
- Markers of osteoblastic differentiation such as osteocalcin,osteonectin, SATB2 have been proposed to be potentially useful in such cases.

REFERENCES

1 Stitzlein RN, Wojcik J, Sebro RA, Balamuth NJ, Weber KL. Team Approach: Osteosarcoma of the Distal Part of the Femur in Adolescents. JBJS Rev. 2017 Dec;5(12):e5.
2. Wadhwa N. Osteosarcoma: Diagnostic dilemmas in histopathology and prognostic factors. Indian J Orthop. 2014 May;48(3):247-54.