

MICOD – 21/06/2024

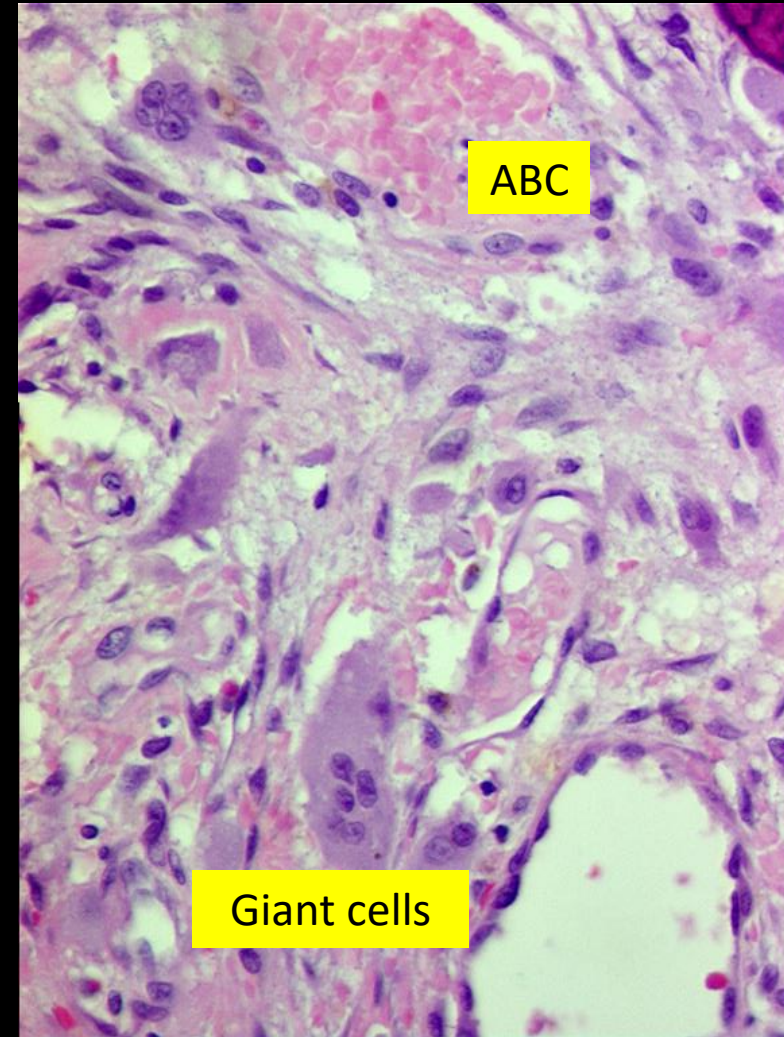
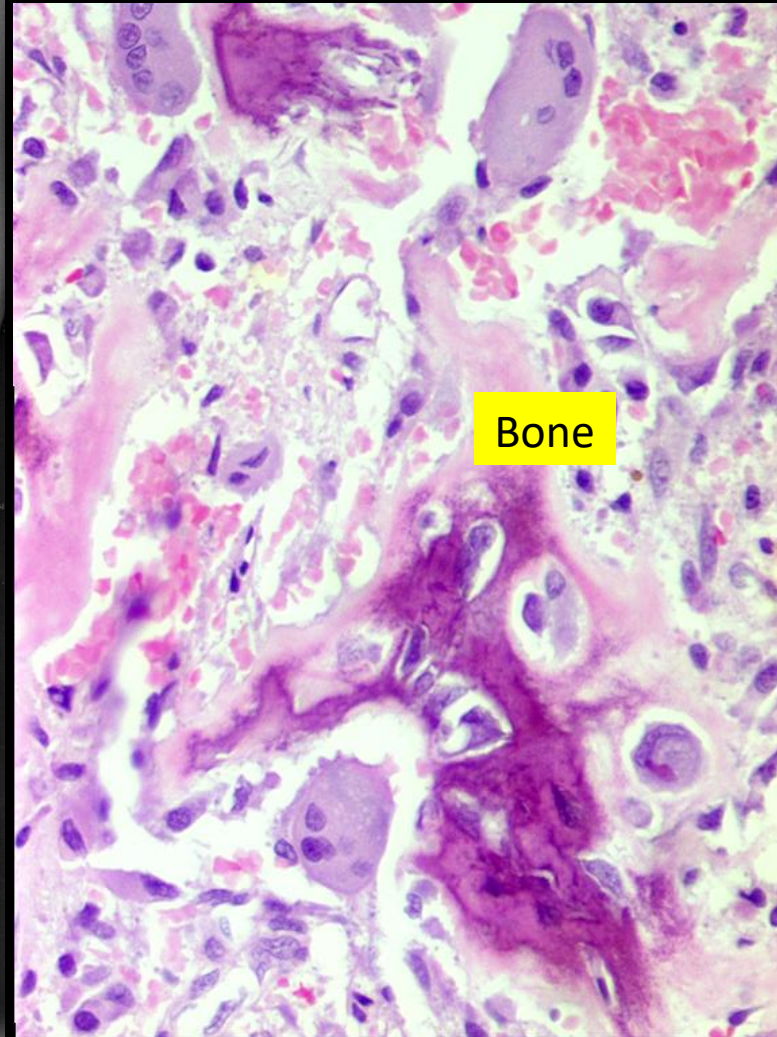
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MI-COD

MSS INDIA- Case Of the Day

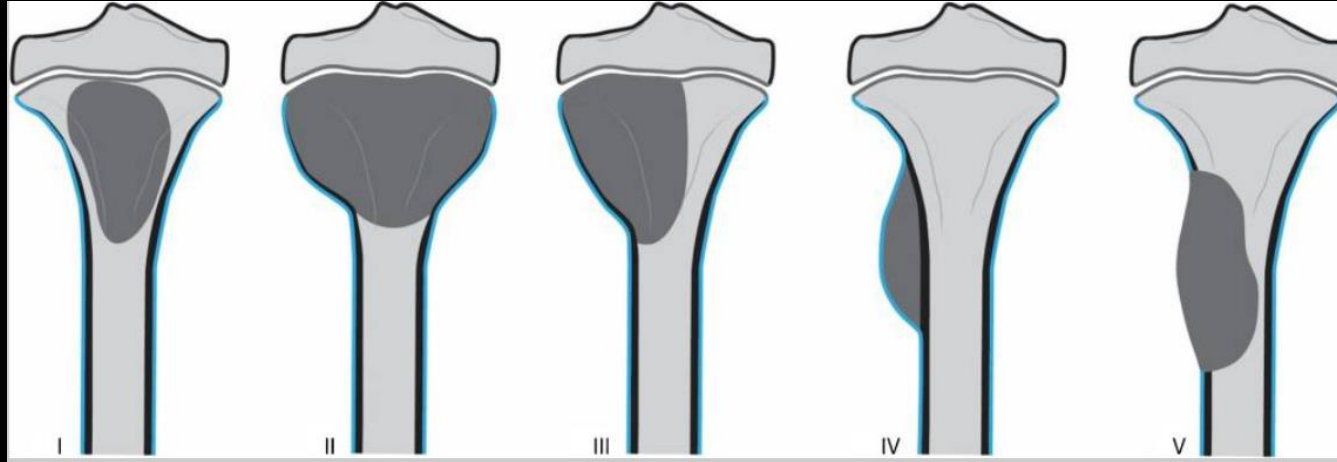


Osteoblastoma with Aneurysmal Bone Cyst (ABC)



Aneurysmal Bone Cyst (ABC)

Restrepo R et al. Update on aneurysmal bone cyst: pathophysiology, histology, imaging and treatment. *Pediatr Radiol*. 2022 Aug



ABC classification according to morphology (Capanna et al)

Type I: centrally located lesions that are well contained with no outline or slightly expanded outline.

Type II: very expansile tumors with cortical thinning involving the entire bone segment.

Type III: eccentric metaphyseal lesions that typically involve only one cortex.

Type IV: subperiosteal lesions growing away from the bone.

Type V: periosteal lesions expanding peripherally to ultimately penetrate the underlying cortex

- Benign but aggressive lesion, predominantly children and young adults, considered a benign osteoclastic giant cell-rich neoplasm
- Can affect any bone and any part of a bone, but the most common in metaphysis of a long bone
- Typical radiographic appearance is an eccentric, lytic, geographical, metaphyseal lesion with a sclerotic border with or without septations
- On MRI, fluid-fluid levels are the hallmark of the lesion but are not pathognomonic
- Divided into primary lesions developing independently & secondary lesions
- The secondary aneurysmal bone cysts can be associated with osteoblastoma, giant cell tumor, osteosarcoma, and fibrous dysplasia

How to diagnose secondary ABC and when to suspect?

- The age of presentation, anatomical location & imaging features of primary bone tumors containing ABC-like changes are variable &, aside from fluid-fluid levels, tend to reflect features of underlying lesions.
- Location is also an important clue in the diagnosis
 - ✓ in cases of fibrous dysplasia and non-ossifying fibroma, the lesion is diaphyseal
 - ✓ in chondroblastoma, the lesion is epiphyseal with an extensive, surrounding inflammatory reaction
 - ✓ in giant cell tumors, the lesion is predominantly epiphyseal but can be metaphyseal in skeletally immature patients
- An associated soft-tissue mass, unusual in ABC, is suggestive of a giant cell tumor or a malignancy, such as osteosarcoma, containing ABC-like changes
- A pure epiphyseal location of a lesion with fluid-fluid levels should raise suspicion of neoplasm containing ABC-like changes rather than an ABC

Pearls & Pitfalls

Telangiectatic OS can mimic ABC; biopsy is suggested before treatment

Even then, the precise diagnosis can be difficult

Surgery and sclerotherapy are widely implemented for the treatment of ABC

No adequate evidence to support a particular therapeutic option

Thank you

