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RESEARCH ARTICLE

RARE PRESENTATION OF GIANT CELL TUMOR AT UNUSUAL SITES.

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Manuscript Info

Abstract

Manuscript History

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Introduction:-

Case 1 :

A female Patient by name shaik ambreen aged 27 years came to orthopaedics OPD with the chief complaints of pain and swelling at the right wrist since 2 months. Pain started insidiously, dull aching type, localised, continuous, aggravated by movements at the Wrist joint, relieved by rest and medication. The swelling is slow growing in nature.

Local Symptoms

Patient c/o swelling followed by pain and decreased range of movements at the wrist joint.

No constitutional symptoms.

Patient is moderately built and nourished.

On examination

Pallor-present

1. Other general examination findings are normal.
2. A swelling of 2X3 cm over the dorsal aspect of the right wrist.
3. Overlying skin is stretched and shiny.
4. Swelling is immobile. Local rise of temperature is present.
5. Tenderness is present.
6. Swelling is firm in consistency.



No egg shell crackling.

| S.No | TEST | RESULTS | NORMAL VALUES |
|------|---------------------------|---------------------|--|
| 1 | HAEMOGLOBIN | 8.6 gms /dl | Men : 13-18 gms/dl Women : 12 - 14 gms/dl |
| 2 | T.W.B.C. | 6,000 /cmm | 4000 -11,000/cmm |
| 3 | DIFFERENTIAL COUNT | | |
| | POLYMORPHS | 60 % | 50 - 70 % |
| | LYMPHOCYTES | 35 % | 25-40% |
| | EOSINOPHILS | 03 % | 1 - 4 % |
| | MONOCYTES | 02 % | 3 - 8% |
| | BASOPHILS | 00 % | 0 - 1 % |
| 4 | E.S.R | mm/hr | Men : 0 - 7 mm/hr Women : 0 -15 mm/hr |
| 5 | ABSOLUTE EOSINOPHIL COUNT | /cmm | 40 - 440/cmm |
| 6 | T.R.B.C. | 4.6 /millions / cmm | 4.5 - 5.5 millions / cmm |
| 7 | P.C.V. | % | Male : 40 - 54% Female : 37 - 47% |
| 8 | PLATELETS | 2,03,000 /cmm | 2,00,000-3,00,000 / cmm |
| 9 | M.C.V. | FL | 86 ± FL |
| 10 | M.C.H. | Pg | 27-32 Pg |
| 11 | M.C.H.C. | % | 32 - 36% |
| 12 | BLEEDING TIME | 2:00 | 1-3 Minutes |
| 13 | CLOTTING TIME | 4:00 | 1-6 minutes |
| 14 | RETICULOCYTE COUNT | % | 0.5 - 1 % |
| 15 | BLOOD GROUP & Rh | | |
| 16 | MALARIAL PARASITE | | |
| 17 | REDMI NOTE 5 PRO | | |
| 18 | MI DUAL CAMERA | | |
| | L.E CELL | | |



Epiphyseo-metaphyseal in location.

Expansile lesion at lower end of right ulna.

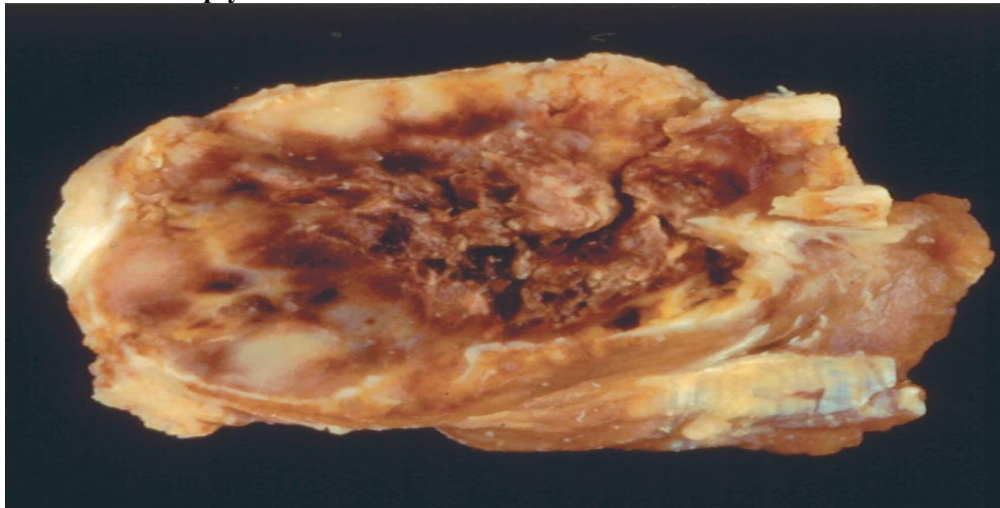
Eccentrically situated.

Thin septae are visible

No periosteal reaction and calcification.

Provisional diagnosis is Giant cell tumour of lower end of left ulna.

Plan of care : Excisional Biopsy



Appears as homogenous, friable, reddish brown mass.

EXCISIONAL BIOPSY REPORT

SANTHIRAM MEDICAL COLLEGE & GENERAL HOSPITAL, NANDYAL
 NH-15, NANDYAL - 512 501, Kurnool Dist. (A.P.) Ph. 08514 - 222203, 222480, Fax - 08514 - 222818

HISTOPATHOLOGY REPORT

Specimen No. 2864/18 Date 15/10/18
 Patient Shri. Ambareen Age 57/1 Unit/Ref 2228/18

RE OF SPECIMEN: Excisional biopsy specimen

CAL DIAGNOSIS: Osteoclastoma

FEATURES: Received multiple grey white to grey brown soft tissue bits along with few hard bony particles altogether measuring 3x2x1.5 cm.

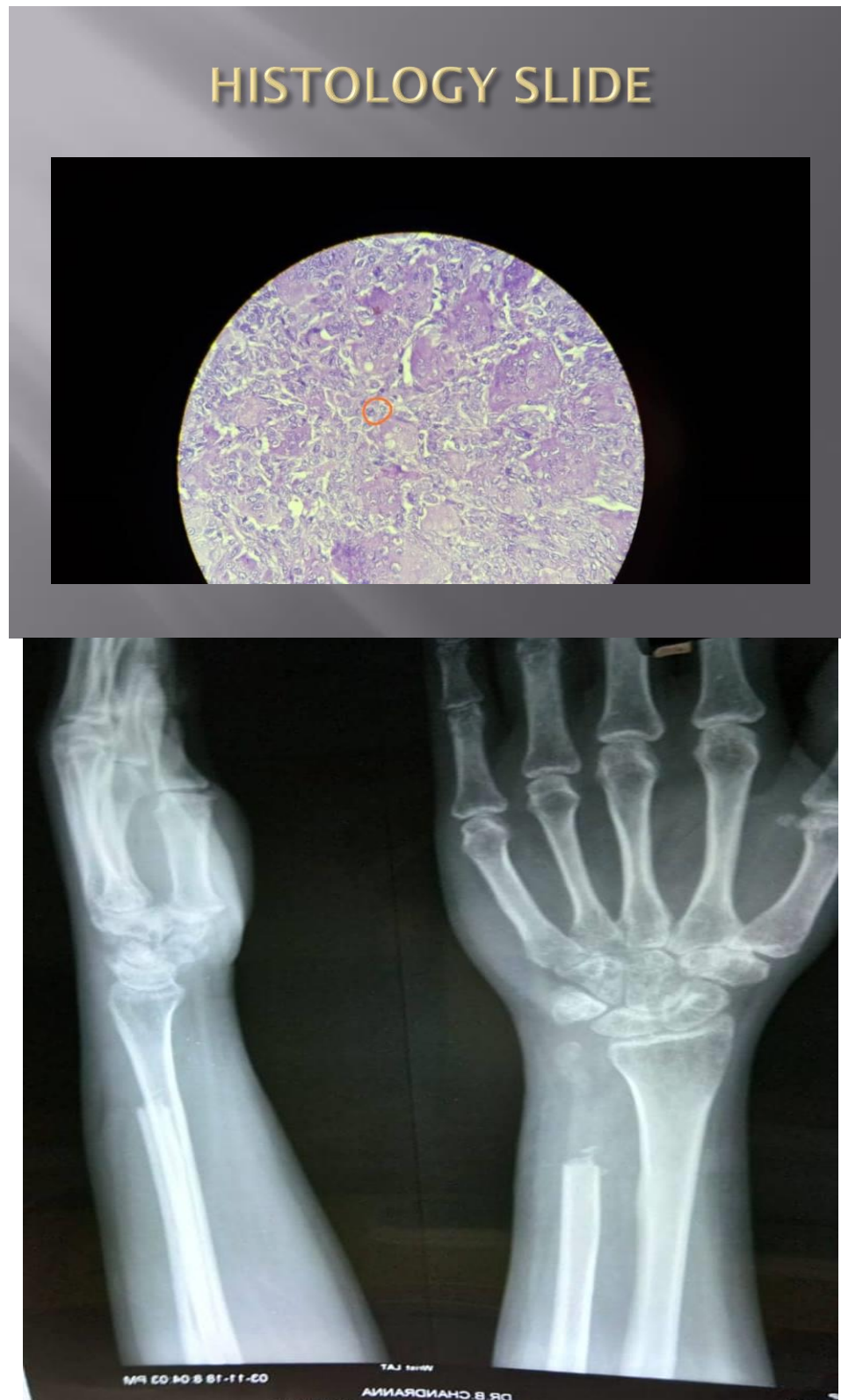
SCOPE FEATURES: Sections studied from soft tissue bits show numerous osteoclast like giant cells uniformly distributed throughout the tissue having more than 50 nuclei admixed with spindle shaped to oval shaped mononuclear cells. Adjacent stroma is showing normal bony trabeculae, fibrous areas and haemorrhagic areas.

[P.T.O.]

Sections studied from bony bits kept for identification show normal bony trabeculae and spindle shaped tissue. Adjacent area is showing tiny tumor tissue composed of numerous osteoclast like giant cells and mononuclear cells.

Impression: Findings are suggestive of "Giant cell tumor [Osteoclastoma] - Right Wrist"

huf

**Case 2:**

A male patient by name pulliah aged 37 years came to orthopaedics OPD with the chief complaints of pain and swelling at the left index finger since 3 months.

Pain started insidiously,dull aching type,localised,continuous,aggravated by movements at the left index finger, relieved by rest and medication The swelling is slow growing in nature.

Local Symptoms

Patient c/o swelling followed by pain and decreased range of movements at the proximal interphalangeal joint.

No constitutional symptoms.

Patient is moderately built and nourished.

On examination

All general examination findings are normal.

A swelling of 1X2 cm over the dorsal aspect of the middle phalanx of left index finger.

Swelling is immobile,fusiform and enlarged in all directions. Local rise of temperature is present.
Tenderness is present.

Swelling is firm in consistency.



| DEPARTMENT OF PATHOLOGY CLINICAL PATHOLOGY REPORT | | | |
|--|---------------------------|------------------|--------------------------|
| Patient Name : K. Pullaiah | | Age: 37 | Sex: M |
| P.No./O.P. NO : 41041 | | Date: | |
| S.N. | TEST | RESULTS | NORMAL VALUES |
| 1. | HAEMOGLOBIN | 9.1 gms/dl | Men : 13-18 gms/dl |
| 2. | T.W.B.C. | 7,000 /cmm | Women : 12 - 14 gms/dl |
| DIFFERENTIAL COUNT | | 4000 -11,000/cmm | |
| 3. | POLYMORPHS | 65 % | 50 - 70 % |
| 4. | LYMPHOCYTES | 36 % | 25-40% |
| 5. | EOSINOPHILS | 0.3 % | 1 - 4 % |
| 6. | MONOCYTES | 0.2 % | 3 - 8% |
| 7. | BASOPHILS | 0.0 % | 0 - 1% |
| 8. | E.S.R. | mm/hr | Men : 0 - 7 mm/hr |
| 9. | ABSOLUTE EOSINOPHIL COUNT | /cmm | Women : 0 - 15 mm/hr |
| 10. | T.R.B.C. | /millions / cmm | 40 - 440/cmm |
| 11. | P.C.V. | % | 4.5 - 5.5 millions / cmm |
| 12. | PLATELETS | 2,06,000/cmm | Male : 40 - 54% |
| 13. | M.C.V. | FL | Female : 37 - 47% |
| 14. | M.C.H. | Pg | 2,00,000-3,00,000 / cmm |
| 15. | M.C.H.C. | % | 86 ± FL |
| 16. | BLEEDING TIME | 2 : 30 | 27-32 Pg |
| 17. | CLOTTING TIME | 4 : 30 | 32 - 36% |
| 18. | RETICULOCYTE COUNT | % | 1-3 Minutes. |
| 19. | BLOOD GROUP & Rh | | 1-6 minutes |
| 20. | MALARIAL PARASITE | | 0.5 - 1 % |
| 21. | MICRO FILARIA | | |
| 22. | L.E.CELL | | |

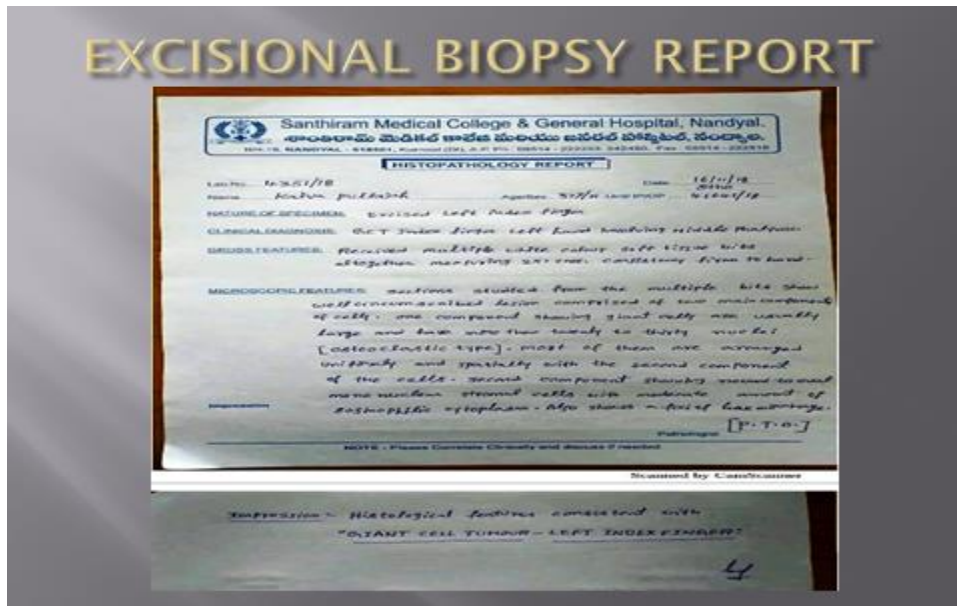


Expansile lesion.

1. No periosteal reaction and calcification.
2. Very thin cortical lining.
3. Giant cell tumour of middle phalanx of left index finger.

Treatment:

Amputation through proximal phalanx.

**Differential diagnosis:**

1. Aneurysmal bone cyst
2. Giant cell reparative granuloma
3. Chondroblastoma
4. Brown tumor
5. Chondromyxoid fibroma.
6. Benign fibrous histiocytoma
7. Non ossifying fibroma

Discussion:

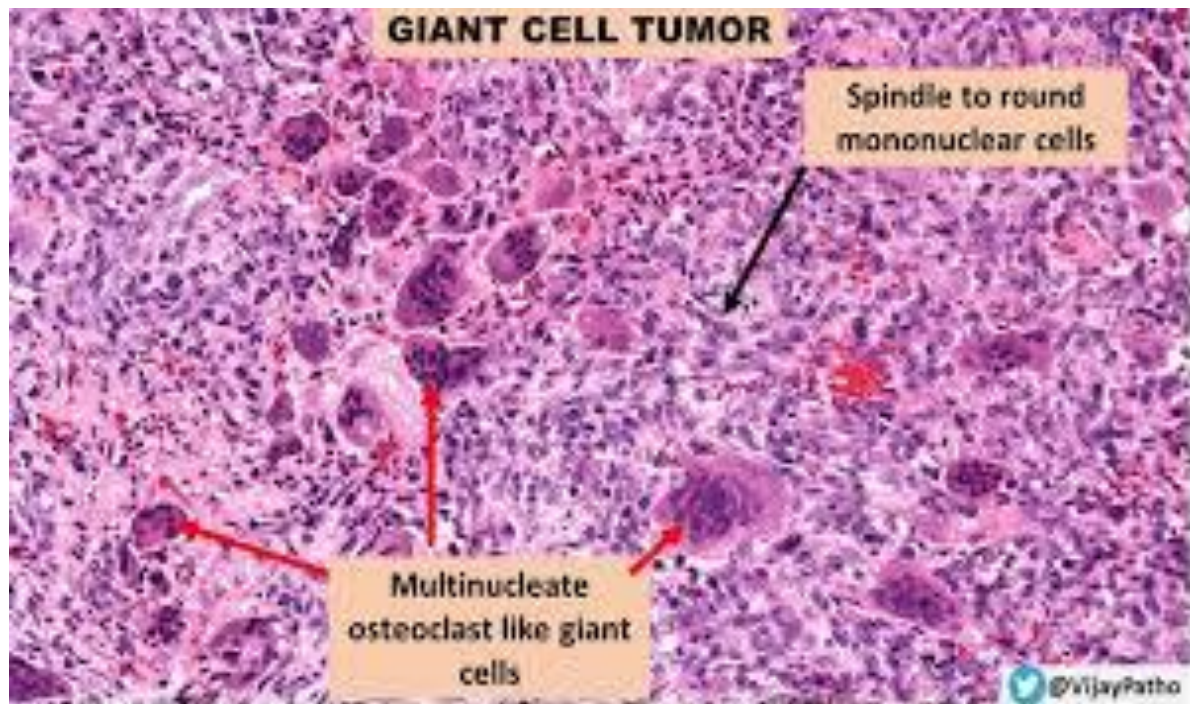
Defination:

Distinct neoplasm arising from non-bone forming supportive connective tissue of marrow with network of stromal cells regularly interspersed with giant cells. 75-80% OF PATIENTS 20-50 YRS.

More common in females.

1. Epiphyseo metaphyseal in location.
2. 55% presents around knee joint.
3. 10% presents around distal radius.
4. 6% presents around proximal humerus.
5. Remaining sites are rarely involved.



**Eccentrically situated.**

1. Expansile lesion.
2. Trabeculations present/soap bubble appearance.
3. Egg shell crackling is characteristic feature.

4. Joint involvement might be seen
5. Not associated with periosteal reactions and intralesional calcifications.



Early lesions:

Homogenous friable reddish brown mass.

Late lesions:

Variegated appearance with blood filled areas.

Jaffe and lichenstein staging:

Grade one:

Numerous giant cells, stromal cells are rare and mitotic activity is rare. This is the benign side of lesion.

Grade two:

Few giant cells and stromal cells with moderate mitotic activity.

Grade three:

Numerous stromal cells, giant cells are rare and high mitotic activity.

No correlation exists between histological grading and clinical behavior of the tumour. Hence grading not widely accepted.

Treatment options:

Excision of bone where no disability/minimal disability occurs by excision.

eg: upper end of fibula

lower end of ulna

Excision and replaced by similar shape bone.

eg: lower end of radius (excision and replaced by upper end of fibula).

Curettage with high speed burr and lavage with liquid nitrogen/phenol/hydrogen peroxide and filling with bone graft/b

eg: lower end of tibia.

upper end of femur.

upper end of tibia.

Wide excision and replaced by custom made prosthesis.

eg: lower end of femur.

upper end of tibia.

Excision and arthrodesis with bone graft.

Radiotherapy whenever surgical intervention is not possible.

eg: spine

Complications :

1. Locally malignant.
2. Pathological fracture.