Original Research Paper

Volume - 15 | Issue - 12 | December - 2025 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Orthopaedics

ENCHONDROMATOSIS A RARE BENIGN BONE TUMOR DISEASE: PRESENTATION AND TREATMENT

Dr. Etish Agarwal Senior Resident,

Dr. Saloni Agarwal PG Resident

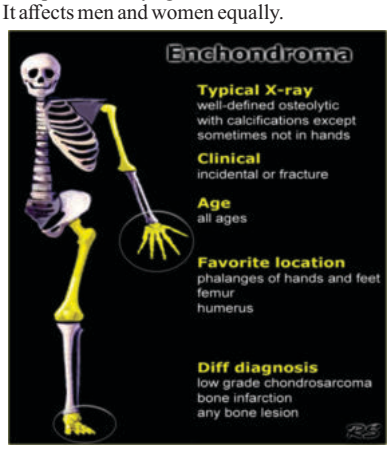
Dr. Mahendra Kumar Agarwal Senior Professor

ABSTRACT Enchondromas are benign bone tumors originating from cartilages. It is mainly discovered incidentally in radiographs or due to symptoms like pathological fracture or pain. Conservative treatment through regular check-up and surgical excision using curettage are the two major treatment methods for enchondromas. This review concludes that small localized asymptomatic lesions can be treated conservatively while most expanding or symptomatic lesions should be treated with simple curettage. Adjuvant treatments like high-speed burring or alcohol instillation are not recommended. a 19 year old man came to opd with chief complaint of pain in phalanges , from last one month due to over growth of bone in phalanges. before 1 month no h/o of trauma no other complaints it was start suddenly and as growth start it cause pain in phalanges .bone curettage was done from different site and excision was send to confirmation of benign or malignant changes.

KEYWORDS : Enchondroma; Hand Surgery; Bone Graft

INTRODUCTION

- An enchondroma is a type of noncancerous bone tumor that begins in cartilage. Cartilage is the gristly connective tissue from which most bones develop. Cartilage plays an important role in the growth process. There are many different types of cartilage in the body. An enchondroma most often affects the cartilage that lines the inside of the bones. It often affects the tiny long bones of the hands and feet. It may also affect other bones such as the thighbone (femur), upper arm bone (humerus), or one of the two lower leg bones (tibia).
- Enchondromas are the most common type of hand tumor. While it may affect a person at any age, it is most common between ages 10 and 20. It affects men and women equally.



Causes

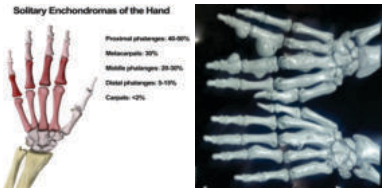
The exact cause of enchondroma is not known. However, it is thought to happen due to either of the following: Overgrowth of the cartilage that lines the ends of the bones, Persistent growth of original, embryonic cartilage.

Symptoms

Hand pain, if the tumor is very large or if the affected bone has weakened and caused a hand fracture . People with Ollier disease or Maffucci syndrome may have severe bone deformities, which cause pain.

DIAGNOSIS

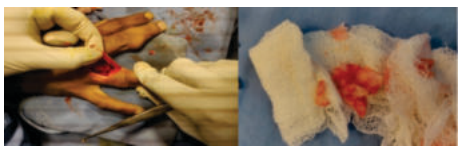
- Diagnosis is sometimes made during a routine physical exam or if the tumor leads to a fracture in the hand.
- In addition to a complete medical history and physical exam, tests may include:
- X-rays. A test that uses invisible electromagnetic energy beams to produce images of internal tissues, bones, and organs on film.
- Radionuclide bone scans , Mri , CT scan. An imaging test that uses a combination of X-rays and computer technology to produce horizontal images or slices of the body. A CT scan shows detailed images of any part of the body, including the bones, muscles, fat, and organs. CT scans are more detailed than general X-rays.



Case

- A 19 year old man came to opd with chief complaint of pain in phalanges , from last one month due to over growth of bone in phalanges. before 1 month no h/o of trauma no other complaints it was start suddenly and as growth start it cause pain in phalanges

Pt admit in ward for routine investigation and x-rays so we plan for bone curettage so to relive from pain. Multiple site bone growth was there in hand it was not spread in other parts of body. Bone curettage was done from different site and excision was send to confirmation of benign or malignant changes. As pt multiple bone growth which indicate of malignant tumor (chondrosarcoma). But provisionally we confirm it as enchondroma.



Treatment

Usually, if an enchondroma isn't causing any pain, it doesn't need to be treated. Your healthcare provider will continue to track it to see if it grows. They may monitor you with additional X-rays or other tests.

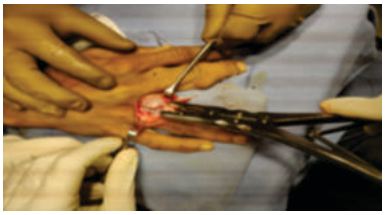
Multiple enchondromas can weaken your bones and cause fractures. If this occurs, then healthcare provider may want to remove the tumors. surgeon may recommend:

Curettage: With a curettage, your surgeon will scrap the tumors out of your bone. Enchondromas typically don't return once your surgeon removes them. If the enchondromas have caused a bone fracture, your surgeon may wait until your fracture has healed before performing the curettage.

Bone graft: After your surgeon performs the curettage, they may fill the bone cavity with a bone graft to stabilize your bone. A bone graft is

bone taken from another bone in your body or from a donor's bone.

Once curettage done then bone grafting done and closer taken slab given for 4 week .



Prognosis

- Enchondroma that isn't causing you any pain, it usually doesn't have to be removed. If you've had a single enchondroma removed from your hand or foot, your prognosis is good. Enchondromas typically don't return once your surgeon removes them.
- You have a higher risk of enchondromas returning in your femur, tibia and humerus. People who have multiple enchondromas have a higher risk of the tumors becoming malignant. Malignant cartilage tumors require immediate removal.

CONCLUSION

Multiple enchondromas are rare benign cartilaginous tumors that require long-term monitoring due to risk of deformity and malignant change. Early diagnosis and regular imaging follow-up are key to good outcomes.

In our case we able to achieve good result in enchondroma of phalanges of hand. There was a significant improvement in pain of hand and able to his normal routine work after 3 months.

Conflict of Interest: None to declare
Source of Funding : Nil

REFERENCES

1. WHO Classification of Tumors Editorial Board, ed. (2020). "Bone tumors". Soft Tissue and Bone Tumors: WHO Classification of Tumours. Vol. 3 (5th ed.). Lyon (France): International Agency for Research on Cancer. p. 338
2. Wang XL, De Beuckeleer LH, De Schepper AM, Van Marck E (2001). "Low-grade chondrosarcoma vs enchondroma: challenges in diagnosis and management". European Radiology. 11 (6): 1054–1057.
3. Turek's Orthopaedics: Principles and Their Application, 4th Edition, Vol-1, Samuel L Turek, page 599.