



(CASE REPORT)



Dystrophic calcification mimicking a soft tumor: A case report

Madhurima Mahanti *

Food and Nutrition, Department of Home Science, University of Calcutta, West Bengal, India.

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Abstract

Dystrophic calcification- a condition characterized by the formation of calcium salts in the cells, especially in the damaged tissues. It may be sometimes resembled a neoplastic condition such as tumor growth. We report a case of patient who presented with a swelling that is localized, suspected to be a tumor. Following surgical excision and histopathological examination, the lesion or swelling was diagnosed as dystrophic calcification. This case highlights the importance of histopathological analysis or biopsy for accurate and specific diagnosis.

Keywords: Dystrophic; Calcification; Neoplastic; Tumor; Biopsy

1. Introduction

Dystrophic calcification refers to the accumulation of calcium salts in the damaged tissue [1]. It is slightly different from metastatic calcification. In Dystrophic calcification, there is no sign of hypercalcemia, the serum level of calcium is normal. In the metastatic calcification, the serum calcium level is imbalanced leading to hypercalcemia [2]. Clinically dystrophic calcification may present as a firm mass that can mimic as a tumor that can lead to confusion in the diagnosis .Therefore histopathological examination is essential to confirm the diagnosis and rule out malignancy.

2. Case presentation

A 26-year-old female patient presented with localized swelling on the right forearm, suspected to be a soft tissue tumor. The swelling had not increased in the size very gradually and the patient had it for the past 7 years with no other discomfort. The patient only had aesthetic problem regarding this swelling. The swelling was not painful at all and there was no redness or color change and the patient had no other swelling despite this one in the body and point to be noted the patient had a previous hand fracture on that specific hand.

Clinical examination revealed a movable mass at the affected site, suspected to be a neoplastic growth at first. Imaging studies suggested different opinions like a small well defined heteroechoic lesion with internal calcification, suggesting a post traumatic heterotopic ossification (0.57 *0.44 cm) or myositis ossification or calcified granuloma. The biochemical parameters were within normal range.

The patient underwent a successful surgical excision of the lesion. The excised specimen was sent for histopathological exam. The biopsy report confirmed the deposition of calcium salts without any signs of malignancy and no atypia cells are seen.

*Corresponding author: Madhurima Mahanti

Table 1 The whole procedure to come in conclusion as Dystrophic calcification

After clinical examination by a doctor	A swelling might be a tumor or lipoma
After Xray	The swelling might be a calcified granuloma or calcified cyst.
After ultrasound	Calcified granuloma or Myositis ossification
After ultimate Biopsy	Dystrophic calcification was seen with no abnormal cells and no malignancy.

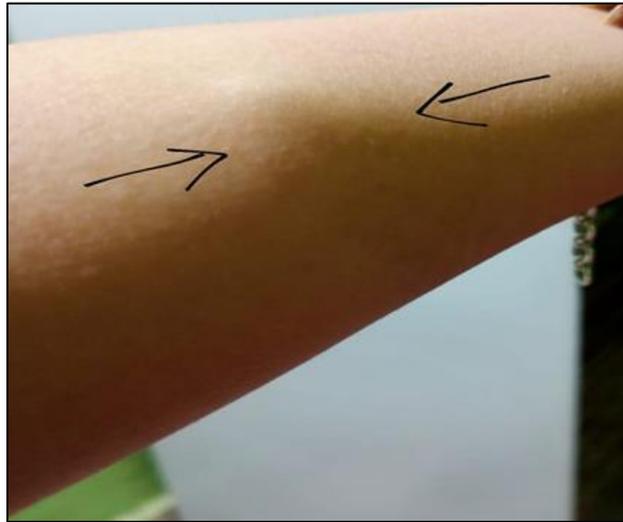


Figure 1 Clinical swelling on the right forearm



Figure 2 X-ray of the forearm revealed a small well-defined radiopaque calcified lesion

3. Discussion

Histopathological exam is the only definite way for diagnosis. Clinical and imaging exams showing different perspectives such as myositis ossification, post traumatic calcified granuloma. Myositis ossification is slightly different from dystrophic calcification. In Mo, the bone formation occurs in the muscle tissues[3]. In dystrophic calcification, the calcification occurs when calcium salts deposited in the tissues. So, only histopathological examination can only identify what is exactly the cause is. Otherwise, there is no definite way. In biopsy, there is confirmation of whether there is any sign of precancer or cancer which can be life threatening. Moreover, there is a possibility that previously the patient had a fracture on the hand, that might can lead to this condition because we know that Dystrophic calcification occurs when calcium deposits in the damaged tissue.

4. Conclusion

Dystrophic calcification can mimic any other conditions like any soft tissue tumor or any other forms like Myositis ossification. Accurate diagnosis relies on biopsy. Awareness of this condition is important to avoid misdiagnosis.

Compliance with ethical standards

Disclosure of conflict of interest

There is no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Dystrophic calcification - Knowledge and References - Taylor & Francis <https://share.google/HLXmQInE5SZMYIYVn>
- [2] Dystrophic vs. metastatic calcification | Pathology Student <https://share.google/ILsoybnRGrXdQU0Aa>
- [3] Myositis Ossificans - Pathology - Orthobullets <https://share.google/MsUlngnf1Fd69ps6H>