

Acral Metastasis from Carcinoma Lung Presenting As Pathological Fracture of Index Finger: A Case Report

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Abstract :

Introduction : Metastasis to acral skeleton is uncommonly encountered in routine clinical practice. Originating frequently from lung, breast or gastrointestinal malignancies & these are often associated with an underlying widespread disease. Timely diagnosis and intervention are important for improvement of the quality of life of these patients. Here we report a case of pathological fracture of proximal phalanx of left index finger in a case of carcinoma of left lung treated with radiotherapy with good pain palliation.

Key words : Acral Metastasis, Carcinoma Lung

Introduction :

Metastasis to bones has been found to be frequently associated with several malignancies; lung, breast, prostate, kidney and gastrointestinal tumours being implicated more often.^(1,2) Axial skeleton is most commonly involved, followed by pelvis including femur, ribs and proximal limb girdles.⁽³⁾

Acral lesions account for 0.2% of bone metastasis, presenting as painful tender swelling of the phalanx/phalanges and pathological fracture on radiograph.⁽⁴⁾ Most of the time these are unilateral and solitary but can be bilateral as well.^(3,4,5) These often go misinterpreted when other features of malignancy are not apparent.

Delayed diagnosis and extensive dissemination translates into guarded prognosis in these patients. Treatment of the secondary metastasis does not improve survival. Treatment intention is palliative.^(2,6)

Here we report a case of metastasis to proximal phalanx of left index finger from primary malignancy of lung with the aim to emphasize the importance of differential diagnosis while encountering apparently benign lesions in routine practice.

Case :

A 52-years old male patient, known smoker, presented with painful swelling of left index finger for 3 months.

He was treated for the same at several places, with no relief of symptoms, before being referred to our institution. On examination, there was swelling and tenderness over proximal part of left index finger with pain on movement. MRI of the same hand was suggestive of fracture of distal shaft of proximal phalanx of left index finger with associated soft tissue component and perilesional oedema. PET-CT scan was suggestive of a soft tissue opacity in the apico-posterior segment of left lung as shown in FIGURE 1. Except for the lesion in the left index finger which was suggestive of metastasis, there was no evidence of lesion elsewhere in the body. True-cut biopsy from the lung lesion was suggestive of adenocarcinoma.

The patient was treated on telecobalt unit for palliation of local symptoms. He received a total dose of 30Gy in 10 fractions through single anterior portal once a day, five days a week for two weeks. Subjective response post-radiation was good and the patient was further put on chemotherapy for the primary lesion.

Discussion :

Acral dissemination is a rare incidence and a rarer presenting feature.^(1,2,6) Most common tumours implicated are lung carcinomas followed by breast, renal and gastrointestinal carcinomas.⁽³⁾

Fenestrated bone marrow capillaries, high blood flow in the areas of red marrow and adhesive molecules on osteoclasts and osteoblasts facilitate bone dissemination. The underlying mechanism in acrometastasis is unclear, provided the relative dearth of red bone marrow at these sites. Bilateral involvement is infrequent. Also, laterality maybe influenced by

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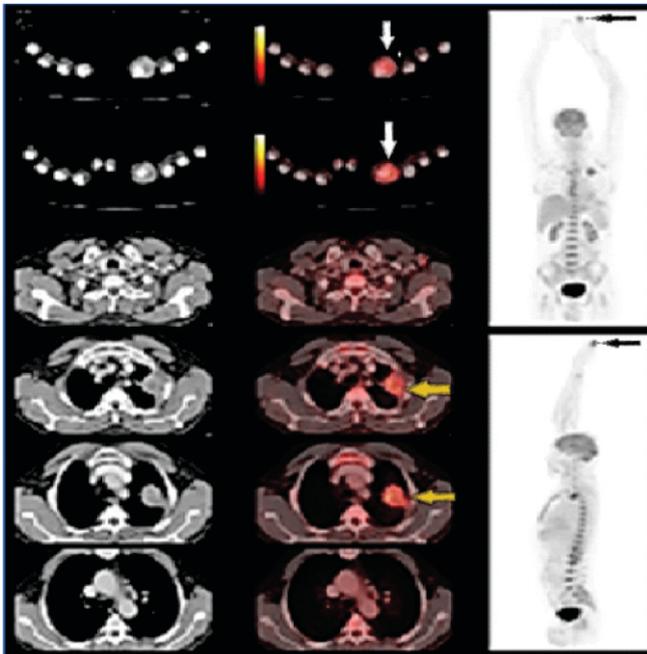
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Figure 1: PET-CT images showing primary lesion in lung with increased uptake in left index finger. The white and black arrows indicate the acral lesion while the yellow arrows point towards the primary lesion in left lung.



dominant side and at the distal phalanx.⁽⁷⁾ Some have hypothesised increased blood supply to be the reason, while others suggest possibility of injury to the dominant hand to be the probable cause.⁽³⁾ In the present case, however, the lesion was on the non-dominant side.

These lesions closely mimic other benign conditions like infection, inflammation and trauma and thus camouflage an underlying perilous condition. The clinical picture of pain, erythema, oedema should thus be accompanied with a detailed history to direct the further workup & hence diagnosis and treatment.

Lung carcinomas are the most common cause of acrometastasis and account for approximately 50% of the incidences. The lesions are lytic in nature, like other metastases of bronchogenic origin.

Acral spread usually indicate widely disseminated disease and poor prognosis. Life expectancy after presentation is estimated to be 6 months. Therefore, palliation of symptoms and improvement of quality of life of these patients remain the aims of the treatment. Surgical

interventions, like wide excision, amputation, curettage, cementing, radiotherapy and chemotherapy are the most commonly used measures, tailored to the patients' general conditions and status of the primary disease. In this patient, the metastasis was solitary as evident from the PET-CT scan. The patient is on regular follow-up with good pain palliation after one month.

Conclusion:

Uncommon presentation of a common disease entity is often encountered in clinical practice. Present case is of lung carcinoma with primary presentation of pathological fracture of index finger. Hence it remains of utmost importance to weigh the differential diagnoses and investigate any of such presentations, to establish the diagnosis and to guide further management.

References :

1. Kumar, P. P. (1975). Metastases to the bones of the hand. *Journal of the National Medical Association*, 67(4), 275–276.
2. G. Asencio, C. Hafdi, H. Pujol and Y. Allieu, "Osseousmetastases in the hand. A general review of three cases," *Annales de Chirurgiedela Main*, vol. 1, no.2, pp.137–145, 1982.
3. C. J. Flynn, C. Danjoux, J. Wongetal., "Two cases of acrometastasis to the hands and review of the literature," *Current Oncology*, vol. 15, no.5, pp.51–58, 2008.
4. Lawrence Stephen Long, Leslea Brickner, Lisa Helfend, Tony Wong, and Derek Kubota, "Lung Cancer Presenting as Acrometastasis to the Finger: A Case Report," *Case Reports in Medicine*, vol. 2010, Article ID 234289, 3 pages, 2010. doi:10.1155/2010/234289.
5. Salih Soylemez, Murat Demiroglu, Mehmet Ali Yayla, Korhan Ozkan, Bugra Alpan, and Harzem Ozger, "Lung Metastasis Mimicking Fingertip Infection," *Case Reports in Oncological Medicine*, vol. 2015, Article ID 708789, 3 pages, 2015. doi:10.1155/2015/708789.
6. R. Baran, P. Guillot, and A. Tosti, "Metastasis from carcinoma of the bronchus to the distal aspect of two digits," *British Journal of Dermatology*, vol.138, no.4, p.708, 1998.
7. M. Arpaa, M. R. V'azqueza, P. S. Camineroa et al., "Digital acrometastasis," *Actas Dermo-Sifiliogr'aficas*, vol. 97, no. 5, pp. 334–336, 2006.