

Painful Unidigital Clubbing- First Sign of Malignancy



Medical Science

KEYWORDS: Unidigital clubbing; acral metastasis; adenocarcinoma bronchus.

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ABSTRACT

Bone metastasis in the appendicular skeleton is rare beyond the elbow in the upper limbs and below the knee in the lower limbs. Very rarely metastasis occurs to metacarpals and phalynx. When such acral metastasis are present, primary must be looked for in the lungs and Kidneys. In our patient, there were no symptoms related to the primary lung malignancy and the only sign was due to painful finger due to acral metastasis.

Introduction: Lung Cancer is the most common cause of cancer death worldwide. The WHO International Agency for Cancer reported global incidence of 1.8million new cases in 2012.¹ It also accounts for nearly one-third of all cancer deaths in the United States and with a 5-year survival rate still being 17% only.²

The major risk factor for lung cancer is tobacco smoking. Both the number of cigarettes smoked per day and duration of smoking correlate with lung cancer risk, with longer duration associated with higher risk.³ Furthermore, lung cancer occurring in never-smokers is relatively common, occurring in about 20,000 individuals in the United States. This underscores that the etiology of lung cancer is complex and not well understood.²

These patients come to attention because of symptoms related to the primary tumour, metastasis to distant sites or paraneoplastic syndromes. The most common pulmonary symptoms are cough, haemoptysis and dyspnoea. The most common sites of metastasis are Brain, bone, liver, adrenals, lung though any organ may be affected.⁴

The most common site of skeletal metastases was the spine in 50% of patients, followed by the ribs (27.1%), ilium (10%), sacrum (7.1%), femur (5.7%) and humerus, scapula and sternum (2.9%).⁵ The prognosis was worse in patients with metastasis to the appendicular bone than in patients with metastases only on an axial bone.⁶

Case report: A 46 year old man presented to medical outpatient department with complaints of swelling of the tip of middle finger of right hand since 2 months. Patient was a washer man by occupation, non-smoker and non alcoholic. Patient was previously treated as paronychia with no significant improvement.

Examination revealed painful unidigital clubbing of the middle finger (Fig 1a-1b). Multiple swellings were noted over the chest, retroauricular region. Left sided LMN facial palsy also noted and rest of systemic examination was within normal limits. Plain Radiograph of the hand showed complete erosion of the terminal phalynx of middle finger suggestive of metastatic lesion from unknown primary. (Fig 2)

Battery of investigations to find out the primary malignancy was undertaken. Chest X-ray showed homogenous opacity in the right hilum (Fig 3a) CT Chest and abdomen was performed which showed an irregular mass in the right main bronchus with hilar lymphadenopathy. (Fig 3b-3c). Multiple metastases were also noted in the liver, spine and mesenteric lymph nodes. CT Brain showed osteolytic lesion eroding the left temporal bone suggestive of high grade metastasis (Fig. 3d). CT guided

biopsy from lung mass showed poorly differentiated Adenocarcinoma. (Fig 4a-4b). Biopsies from liver masses, terminal phalynx also showed evidence of adenocarcinoma metastasis.

During the course of stay in the hospital, patient developed paraplegia and paralytic ileus due to spine metastasis. Patient succumbed due to sepsis and multiorgan dysfunction 4 days after admission in the intensive care unit.

Discussion: Bone metastases are seen particularly in Lung, Breast and Prostate cancer. Metastasis occurs to hematopoetically active bones, Hence Metastasis in hand and foot are rare.⁷ Only 0.007% to 0.3% of all bone metastases.⁸ Metastases in the hand arise mainly from lung (47%), kidney (13%), and breast cancer (12%).⁹ The prognosis in patients with acral metastases is poor. The median survival after presentation of a metastasis in the hand or foot is believed to be 6 months.¹⁰

Conclusion: Acral metastases are rare. They can be the initial presenting complaint without any specific symptom from the underlying primary. Most common sites of primary in patients with acral metastasis are lung, kidneys and Breast. The prognosis is very poor in such cases with mean survival of 6 months.

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Informed consent was taken from the patients for publication of photographs in a scientific journal according to the guidelines given in the Helsinki Declaration, 1964 and its later amendments.

Conflict of interest: All authors i.e Dr. Chandrashekhar K, Dr. Vishwajeeth K Pai and Dr. Ishwar S Hasabi declare that they have no conflict of interest whatsoever.

Ethics committee approval was taken for publishing this case report from the institutional ethics committee of KIMS, HUBLI and all ethical standards were adhered to according to the Declaration of Helsinki, 1964 and its later amendments.

Figure legends

Figure 1- Clinical photograph of the patient

a- Anteroposterior view

b- Lateral view

Figure 2- Plain radiograph of the hand showing phalynx metastasis

Figure 3- radiological workup.

a- Chest X-ray of the patient showing Homogenous Hilar opacity.

b- CT Chest showing mass in right main bronchus

c- CT Chest showing mass in right main bronchus

d- CT scan brain showing erosion of left temporal bone.

e- CT scan brain showing erosion of left temporal bone

Figure 4(a-b)- Histopathological picture showing adenocarcinoma.



Figure 2- Plain radiograph of the hand showing phalynx metastasis



(Fig-1a): Clinical photograph of the patient- Anteroposterior view



(Fig-1b): Clinical photograph of the patient- Lateral view



(Fig-3a): Chest X-ray of the patient showing Homogenous Hilar opacity.



(Fig-3d): CT scan brain showing erosion of left temporal bone.



(Fig-3e): CT scan brain showing erosion of left temporal bone.

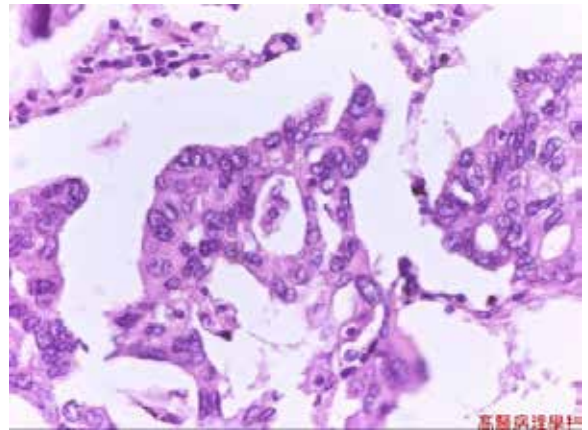
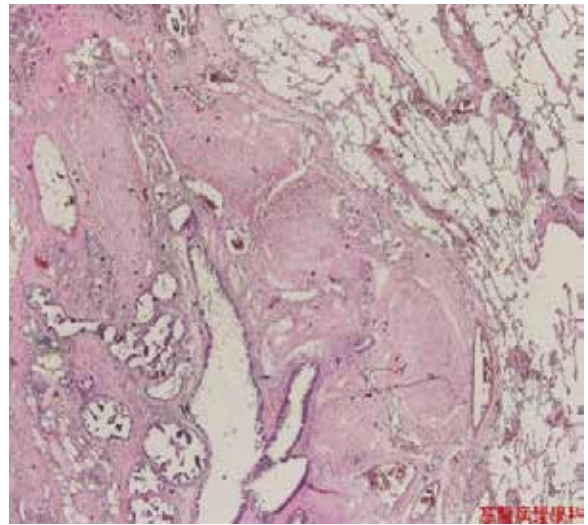


Figure 4(a-b)- Histopathological picture showing adenocarcinoma.

REFERENCE

1. GLOBOCAN 2012. Estimated cancer Incidence, mortality and prevalence worldwide in 2012. International agency for research on cancer, World Health Organization. 2013. http://globocan.iarc.fr/pages/fact_sheets_cancer.aspx. | 2. Seigel R, Naishadham D, Jemal A. Cancer statistics, 2013. CA Cancer Clin 2013;63:11-30. | 3. Burns DM, Anderson CM, Gray N. Has the lung cancer risk from smoking increased over the last fifty years? Cancer Causes Control 2011; 22:389-397 | 4. Ost D, Yeung S, Tanoue L et al. Clinical and organizational factors in the initial evaluation of patients with lung cancer. American College of Chest physicians evidence based clinical practice guidelines. Chest 2013;143:e121S. | 5. Tsuya A, Kurata T, Tamura K, Fukuoka M. Skeletal metastases in non-small cell lung cancer: a retrospective study. Lung Cancer. 2007 Aug; 57(2):229-32. | 6. Sugiura H, Yamada K, Sugiura T, Hida T, Mitsudomi T. Predictors of survival in patients with bone metastasis of lung cancer. Clin Orthop Relat Res. 2008 Mar; 466(3):729-36. | 7. Matthew A Aemley, Rebecca B Goodyand Mahmood Mughrabi. Occult Lung malignancy presenting as finger pain,Journal of Medical Case Reports 2008, 2:364 | 8. Healy JH, Turnbull AD, Miedema B, Lana JM. Acrometastases. A study of twenty-nine patients with osseous involvement of hands and feet. J Bone Joint Surg Am. 1986;68(5): 743-746 | 9. Libson E, Bloom RA, Husband JE. Metastatic tumours of bones of the hand and foot. A comparative review and report of 43 additional cases. Skeletal Radiol. 1987;16(5):387-392 | 10. Flynn CJ, Danjoux C, Wong J, et al. Two cases of acrometastasis to the hands and review of the literature. Curr Oncol. 2008;15(5):51-58