



Two Cases of Acrometastasis from Lung Cancer Revealed on ^{18}F -FDG PET/CT

^{18}F -FDG PET/BT ile Gösterilen Akciğer Kanserine Bağlı İki Akrometastaz Olgusu

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Abstract

We present 2 cases of acrometastases that manifest as the first signs of underlying lung cancer. The first case is 37 year-old-man misdiagnosed and treated as having a traumatic fracture at the left thumb. The second case is a 77 year-old-man who received treatment for soft tissue infection at left hand for 4 weeks. In both cases ^{18}F fluorine-fluorodeoxyglucose positron emission tomography/computed tomography demonstrated primary malignant lesions in the lungs consistent with primary lung cancer with acrometastases.

Keywords: Acrometastasis, lung carcinoma, bone metastasis, PET/CT, ^{18}F -FDG-PET

Öz

Altta yatan akciğer kanserinin ilk bulgusu olarak ortaya çıkan iki akrometastaz olgusu sunuyoruz. İlk olgu sol el baş parmağında travmaya bağlı kırık teşhisiyle bir süre tedavi almış olan 37 yaşında erkek hastadır. İkinci olgu sol elinde yumuşak doku enfeksiyonu tanısıyla 4 hafta tedavi almış olan 77 yaşında erkek hastadır. Her iki olguya ait akral metastazların primer kaynağının akciğer olduğu ^{18}F flor-florodeoksiglukoz pozitron emisyon tomografisi/bilgisayarlı tomografi ile gösterildi.

Anahtar kelimeler: Akrometastaz, akciğer kanseri, kemik metastazi, PET/BT, ^{18}F -FDG-PET

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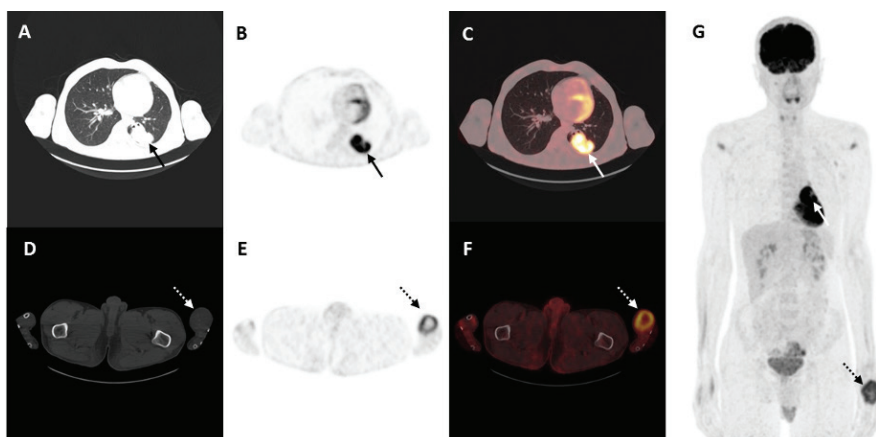


Figure 1. A 37 year-old-man presented with pain and swelling of his left thumb. He previously had a plaster cast treatment for two months considered as a traumatical fracture. His pain got persistent and the mass at the left thumb grew gradually. According to the radiological features, biopsy was planned suspicion of bone metastasis. In tissue samples taken from the first metacarpal bone and related soft tissue, histopathology showed a high-grade neuroendocrine tumor metastasis, likely originating from the lung. The patient was referred to ¹⁸fluorine-fluorodeoxyglucose (¹⁸F-FDG) positron emission tomography/computed tomography (PET/CT) to search for the underlying primary tumor. There was a mass lesion in the posterobasal segment of the left lung 4.3x3.6 cm size with intense ¹⁸F-FDG uptake, consistent with primary lung cancer (arrow). The metastatic lesion at the left first metacarpal region also showed intense uptake (dash arrow). There was no other pathological hypermetabolic focus at any point of the body.

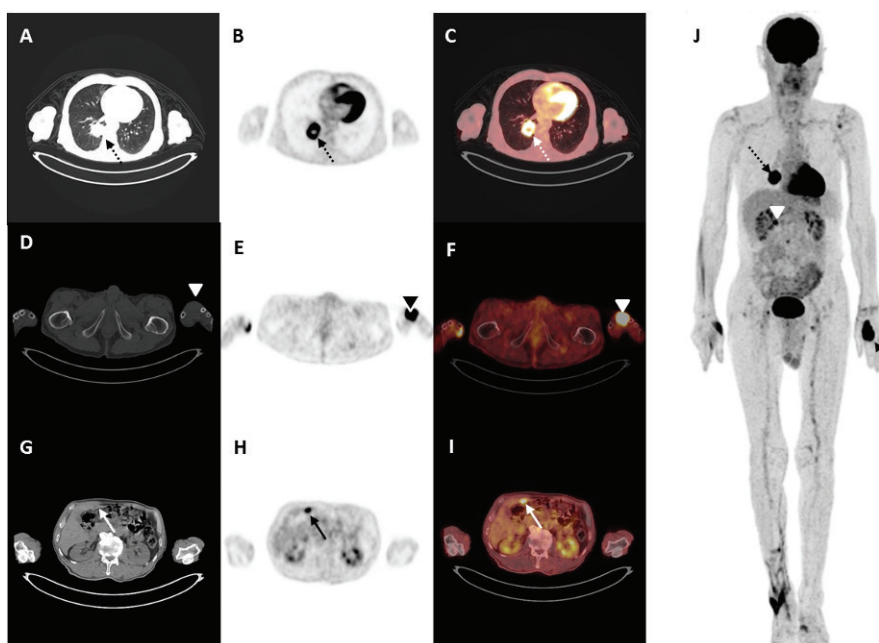


Figure 2. A 77 year-old-man presented with an open wound and a mass lesion on his left hand mimicking a soft tissue infection. Because the enlarging mass did not respond to any treatment, the patient underwent open biopsy. Histopathology revealed metastasis from squamous cell lung cancer. The patient was referred to ¹⁸F-FDG PET/CT for diagnosis and staging. PET/CT demonstrated the primary malign tumor in the inferior lobe of the right lung 3.4x4.1 cm size with intense ¹⁸F-FDG uptake (dash arrow). In addition to the metastatic lesion at the second metacarpal region of the left hand, PET/CT showed metastases in the right hand thumb region (arrow head) and left lobe of the liver (arrow) with intense ¹⁸F-FDG uptake. The accumulation on the right foot ankle was related to the injection site. Acrometastasis is the first sign of cancer in approximately 25% of cases and is a common finding in diffuse metastatic disease. Early diagnosis enables early treatment and positively affects the patient's quality of life (1). Acrometastasis as the first manifestation of an occult neoplasm, can be mistaken for more common benign lesions, resulting in inappropriate management (2). Main symptoms are heat, redness, swelling, tenderness, and intermittent pain in the extremity (3,4). Osteomyelitis, gouty arthritis, pyogenic granuloma, tuberculous dactylitis, and primary skin malignancies should be considered in the differential diagnosis. acrometastasis is most commonly caused by lung, kidney, breast and colon cancers, in turn (4). The mean survival time of patients with acrometastasis is 7 months, reflecting a poor prognosis (4). Since acrometastases are rare, no standard treatment protocol has yet been established. Because the prognosis is poor, treatment is planned palliative; such as ideal tumor resection, preservation of hand functions, elimination of pain and rapid recovery (5).

Ethics

Informed Consent: The written and verbal constant has been obtained before the PET/CT scan.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: R.Ş., Ö.E.F, E.B., N.E., T.FÇ., Concept: R.Ş., Ö.E.F, E.B., N.E., T.FÇ., Design: R.Ş., Ö.E.F, E.B., N.E., T.FÇ., Data Collection or Processing: R.Ş., Ö.E.F, E.B., N.E., T.FÇ., Analysis or Interpretation: R.Ş., Ö.E.F, E.B., N.E., T.FÇ., Literature Search: R.Ş., Ö.E.F, E.B., N.E., T.FÇ., Writing: R.Ş., Ö.E.F, E.B., N.E., T.FÇ.

References

1. Muñoz-Mahamud E, Combalia A, Carreño A, Arandes JM. Five cases of acrometastasis to the hand from a carcinoma and review of the literature. *Hand Surg Rehabil* 2017;36:12-16.
2. Long LS, Brickner L, Helfend L, Wong T, Kubota D. Lung cancer presenting as acrometastasis to the finger: a case report. *Case Rep Med* 2010;2010:234289.
3. Machado V, San-Julian M. Prognosis and treatment of acrometastases: observational study of 35 cases treated in a single institution. *Rev Esp Cir Ortop Traumatol (Engl Ed)* 2019;63:49-55.
4. Stomeo D, Tulli A, Ziranu A, Perisano C, De Santis V, Maccauro G. Acrometastasis: a literature review. *Eur Rev Med Pharmacol Sci* 2015;19:2906-2915.
5. Mavrogenis AF, Mimidis G, Kokkalis ZT, Karampi ES, Karampela I, Papagelopoulos PJ, Armaganidis A. Acrometastases. *Eur J Orthop Surg Traumatol* 2014;24:279-283.