Hypertrophic pulmonary osteoarthropathy: an unusual manifestation of lung cancer

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A 71-year-old Japanese man presented to our hospital with a 2-month history of swelling and pain in his bilateral hands, knees, and ankles and a 1-month history of left back pain. He was a current smoker with a 50-pack-year history of tobacco use and had no remarkable medical history. His vital signs were within the normal ranges, and physical examination revealed mild digital clubbing (Figure 1A). Chest radiography revealed a mass in the left upper lobe.

We performed a biopsy of the mass using endobronchial ultrasonography with a guide sheath and then made a diagnosis of lung adenocarcinoma. Furthermore, whole-body bone scintigraphy revealed increased uptake along the tibias, a typical finding of hypertrophic pulmonary osteoarthropathy (Figure 1B). His lung cancer was operable, but he desired only best supportive care.

Hypertrophic pulmonary osteoarthropathy (HPO), also known as Bamberger–Marie syndrome, is a condition characterized by the triad of digital clubbing, periostitis of the long bones, and arthropathy [1]. This syndrome is often associated with malignancy, especially lung cancer, and some known risk factors such as male sex, smoking history, adenocarcinoma, and advanced-stage cancer [1]. Although the pathogenic process in HPO is not fully understood, the involvement with elevated growth factors such as vascular endothelial growth factor has been

reported [1].

Whole-body bone scintigraphy is considered a diagnostic examination and shows symmetrical increased periosteal uptake in the long bones [2], as observed in our patient. This typical finding can be a clue to distinguish HPO and bone metastasis. Treatments for HPO include therapies for the underlying disease; [3] however, our patient declined the treatment for lung cancer.

References

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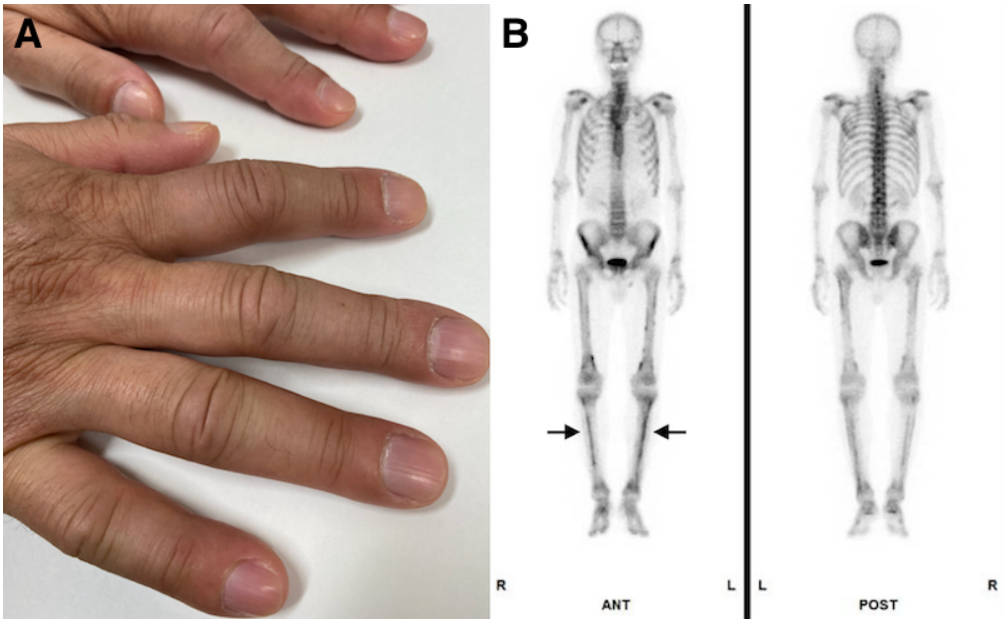
Figure legends

Figure 1. (A) The patient's fingers with mild clubbing. (B) Whole-body bone scintigraphy image showing increased uptake along the tibias (arrow).



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Abbreviation list

HPO: hypertrophic pulmonary osteoarthropathy.