

## Hypertrophic osteoarthropathy without radiographic evidence of new bone formation

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Hypertrophic osteoarthropathy is a syndrome generally regarded as consisting of clubbing of the fingers and toes, a painful symmetrical arthropathy, and a proliferative periostitis, usually of the long bones. I present a case with no radiographic evidence of periostitis.

### Case report

A 54-year-old woman presented initially with a short influenza-like illness and troublesome dry cough. She smoked 20 cigarettes a day. Shortly afterwards she developed pain and stiffness in her wrists and ankles. This rapidly worsened over eight weeks to involve her elbows, knees, and fingers. She could walk only with difficulty because of severe pain in her ankles. Her grip was weak and she found difficulty in pushing doors shut because of pain in her wrist. Indomethacin gave no relief.

On examination she had gross digital clubbing. There was marked non-pitting swelling at both ankles extending to the mid-calf; it was very warm to palpation and exquisitely tender, especially on the medial aspect of the tibiae. She was unable to tolerate the weight of the sheets because of pain. Her wrists and fingers were slightly swollen; the range of movement was slightly diminished. The rest of the examination was normal.

Chest radiograph showed a four centimetre shadow in the right upper lobe and enlarged lymph nodes in the superior mediastinum. Radiographs of all bones in the hands, feet, arms, and ankles were normal with no evidence of new bone formation.

Bronchoscopy showed extrinsic compression of the lower end of the trachea and right main bronchus. She was referred for thoracotomy. Through a right posterolateral incision a large tumour of the posterior segment of the right upper lobe was seen. There

was a huge mass of glands in the superior mediastinum from which a biopsy was taken. The vagus nerve was divided in the region of the main bronchus and also higher in the mediastinum. Histology showed a well-differentiated, mucus-secreting adenocarcinoma.

When she awoke from the anaesthetic her ankles were entirely pain-free. The swelling and accompanying heat resolved completely within 36 hours. The pain in her wrists took 24 hours to resolve.

### Comment

The most common cause of hypertrophic osteoarthropathy in clinical practice is carcinoma of the bronchus.<sup>1</sup> The importance of a correct diagnosis is twofold. Firstly, it may precede symptoms or radiographic evidence of the intrathoracic tumour by several months,<sup>2</sup> facilitating earlier diagnosis of the primary pathology. Secondly, even if the carcinoma is beyond the scope of any curative therapy, vagotomy provides a means for dramatic relief of the symptoms.

I can find no references in the literature to cases of hypertrophic osteoarthropathy with such florid clinical symptoms and signs in the complete absence of radiographic changes. Correct diagnosis of the nature of the arthropathy may have important implications for the management of a patient with this condition.

I should like to thank Dr L Doyle and Mr H Mousalli for permission to report a case under their care.

### References

- 1 Hammarsten JF, O'Leary J. The features and significance of hypertrophic osteoarthropathy. *Arch Intern Med* 1957; 99:431.
- 2 Semple T, McCluskie RA. Generalised hypertrophic osteoarthropathy in association with bronchial carcinoma. *Br Med J* 1955; 1:754-9.

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