Primary lung cancer revealed by dermatomyositis and detected by whole-body scintigraphy with 99mTc-HMDP

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Citation

I Ghfir, N Raïs. *Primary lung cancer revealed by dermatomyositis and detected by whole-body scintigraphy with 99mTc-HMDP*. The Internet Journal of Nuclear Medicine. 2006 Volume 3 Number 2.

Abstract

Dermatomyositis, an inflammatory muscle disease probably related to dysimmunity, is associated with character skin eruptions. Dermatomyositis is often associated with cancer (15 to 40% of cases depending on the series). All histological types and all cancer localizations observed in the general population can be associated with dermatomyositis. We report the case of a patient with small-cell lung cancer revealed by dermatomyositis appearing by a diffuse and intense uptake of 99mTc-HMDP in the whole-body scintigraphy.There have been few descriptions of this association in the literature. Certain clinical features of dermatomyositis would be predictive of its paraneoplastic nature. Prognosis is very poor. Treatment is basically dictated by the underlying neoplasia.

INTRODUCTION

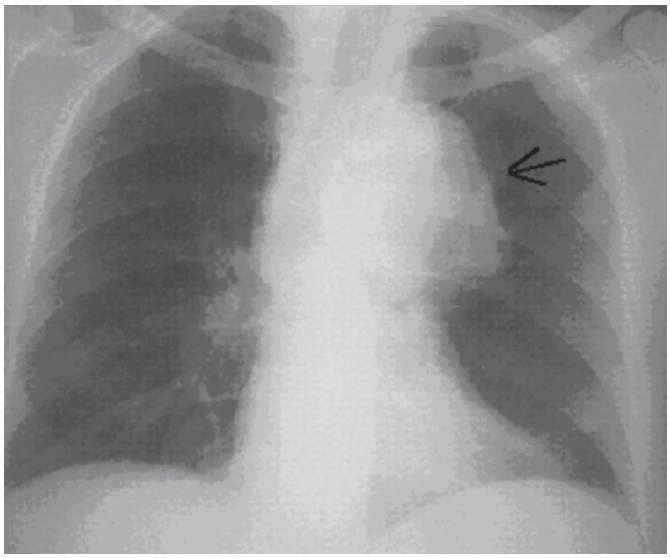
99m-Tc HMDP compounds have the ability to detect nonosseous disorders. Muscular uptake on bone scintigraphy has been reported in various conditions including rhabdomyolysis, inflammatory muscle disease, traumatic myositis, polymyositis and dermatomyosis. We describe here a case of lung cancer revealed by dermatomyositis appearing by a diffuse and intense uptake of 99mTc-HMDP in the whole-body scintigraphy.

CASE REPORT

A 49 year old was hospitalized for muscle weakness over the bilateral proximal extremities with heliotrope cutaneous rash. Physical examination revealed symetrical upper and lower member tenderness. The extensor muscles of the arms were more affected than the flexors. Distal strength was a little more maintained. Blood analysis at admission showed an elevated creatine kinase (CK). A skin biopsy sample reveals an interface dermatitis with a vacuolar changes of the columnar epithelium and lymphocytic inflammatory infiltrates at the dermal-epidermal junction.. Muscle biopsy samples reveal perivascular and interfascicular inflammatory infiltrates with adjoining groups of muscle fiber degeneration/regeneration. Chest radiography obtained at the time of diagnosis revealed an opacity in the upper lobe of the left lung (Figure 1).

Figure 1

Figure 1: Chest radiography showing a suspect opacity in the upper lobe of the left lung.

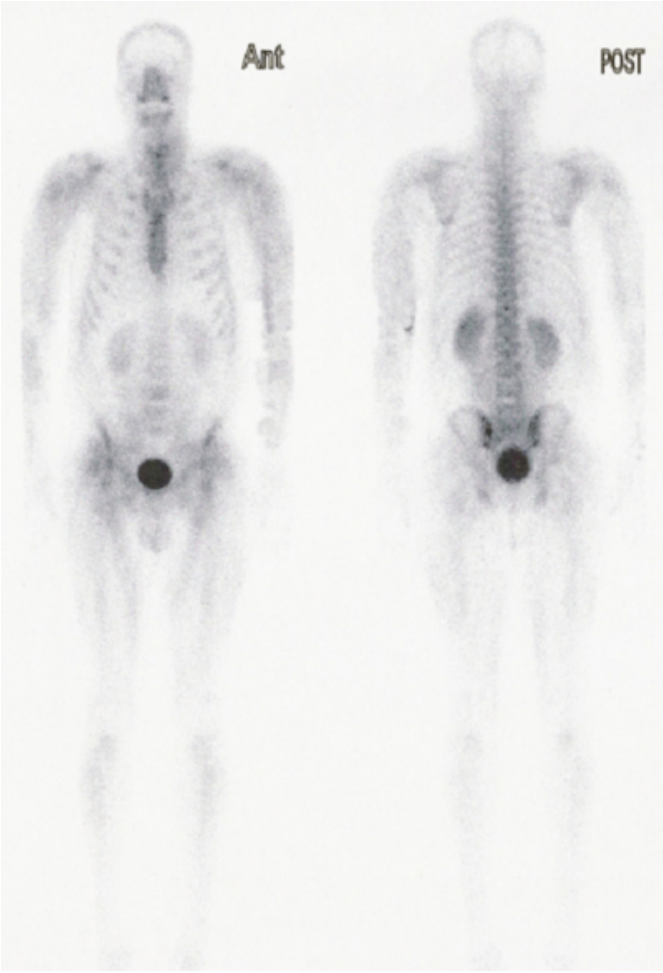


The bronchial fibroscopy allowed access to the lesionand biopsies showed an adenocarcinoma. An assessment of extension was realized (brain and chest cumputed tomography, ultrasonography..), it proved to be negative.

Tc99m-HMDP whole body scintigraphy reveald diffuse and intense uptake of 99mTc-MDP in the shoulder and pelvic girdles, soft parts of upper members and thighs, corresponding to the sites of symptomatic muscles (Figure 2).

Figure 2

Figure 2: Tc99m-HMDP whole body scintigraphy reveals diffuse and intense uptake of 99mTc-MDP was observed in the shoulder and pelvic girdles, soft parts of upper members and thighs.



Corticosteroids (1,5 mg/kg/d) were administered as initial therapy for the muscle disease. The posology was gradually reduced to avoid relapse of the disease. A combination of radiation and chemotherapy was received by the patient to shrink the size of tumor before surgery.

DISCUSSION

Dermatomyositis (DM) is an idiopathic inflammatory myopathy (IIM) with characteristic cutaneous findings. Most often dermatomyositis presents with increasing weakness of proximal (thighs and shoulders) muscle accompanied by a heliotrope cutaneous rash ([1]).

Although dermatomyositis may occur at any age, it mostly affects adults in their late 40s to early 60s or children between 5 and 15 years of age ([2]).

An association between DM and a malignant pathology is found in 15-20% of DM patients ([3]). It is more frequent after 40 years of age. Overlap syndromes and juvenile DM do not have a paraneoplastic context. DM preceedes the appearance of cancer in 70% of the patients. The mean interval between the onset of the two entities is usually less than one year. The malignancy is essentially breast, uterine or ovarian cancer in women, whereas lung, prostate or digestive tract tumors predominate in men. The frequent absence of parallel evolutions of the muscle and malignant pathologies means that DM cannot be considered paraneoplastic syndromes. Cancer is the primary cause of death of adult DM patients, imposing an exhaustive etiological search in patients over 40 years diagnosed with a DM.

Therapy of the muscle component involves the use of corticosteroids with or without an immunosuppressive agent. The skin disease is treated with sun avoidance, sunscreens, topical corticosteroids, antimalarial agents, methotrexate, mycophenolate mofetil and/or intravenous immune globulin ([4,5]). The prognosis depends on the severity of the myopathy, the presence of a malignancy, and/or the presence of cardiopulmonary involvement.

In any case, when dermatomysitis enters within the framework of a paraneoplasic syndrom, its evolution generally depends on the forecast of the primitive tumour and its treatment ([6]).

CONCLUSION

Dermatomyositis is a disease that primarily affects the skin and the muscles but may affect other organ systems. The association between dermatomyositis and malignancy has been recognized for a long time. Knowing that the cancer is the primary cause of death of adult DM patients, this combination imposes an exhaustive etiological search in patients over 40 years diagnosed with a DM.

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