A case of gastric cancer presenting as polymyalgia rheumatica

Sirs,

Polymyalgia rheumatica (PMR), a syndrome in elderly patients, is characterised by pain and stiffness of shoulder and hip girdle (1). Although PMR carries a good prognosis, it can occur as a manifestation of paraneoplastic syndrome (2). We report herein a Japanese patient with gastric cancer who presented with PMR-like symptoms.

A 75-year-old man presented with a 3-month history of progressive pain and moderate stiffness in his shoulder, cervical, hip girdles, and bilateral swelling of wrists and knees joints. A diagnosis of PMR was established and he has been prescribed 15mg prednisolone daily. However, his symptoms were not improved and he was referred to our hospital for further treatments. Medical history revealed a weight loss of 8kg within 3 months. Physical examination revealed the pale conjunctiva, tenderness and limitation of shoulder and hip joint movement, and synovitis of the wrists and knees. There was neither dilatation nor tenderness in the temporal arteries. Laboratory data showed that erythrocyte sedimentation rate (ESR) was 64/mm/h, C-reactive protein (CRP) of 7.3mg/dl, white blood cell (WBC) count of 8000/mm^3, haemoglobin 8.4g/dl and platelet count of 463000/mm^3. Anti-citrullinated peptide antibody and antinuclear antibodies were negative. Although, there was no monoclonal gammopathy, serum IL-6 was markedly elevated (IL-6 55.1pg/ml). Tc-99$_m$ bone scintigraphy indicated abnormal uptake in the bilateral shoulder, wrist, knee and ankle joints (Fig. 1). Peripheral arthritis may develop in PMR (3). However there was no radiographic findings suggesting the elderly-onset seronegative RA, such as bone erosions (data not shown). Accordingly, we searched for an occult malignancy. Although there was no abnormality in total colonoscopy, upper gastrointestinal endoscopic evaluation demonstrated an advanced ^{99m}Tc type tumour of the stomach. Histopathological finding of an endoscopic biopsy of the tumour revealed moderately-differentiated adenocarcrinoma. Computed tomography scans of chest were negative for metastasis or other malignancies. A final diagnosis of PMR with gastric cancer was established. The patient underwent total gastrectomy. After curative resection of the tumour, the musculoskeletal symptoms were disappeared and corticosteroid treatment could be stopped after three months from the operation. Serum elevated levels of IL-6 were also normalised (IL-6 5.5pg/ml).

The malignancies most often reported to present PMR includes gastric cancers as well as gastric stromal tumours (GIST) (4). Atypical presenting features pose problems in the diagnosis of PMR because a wide variety of diseases can mimic this condition (5).

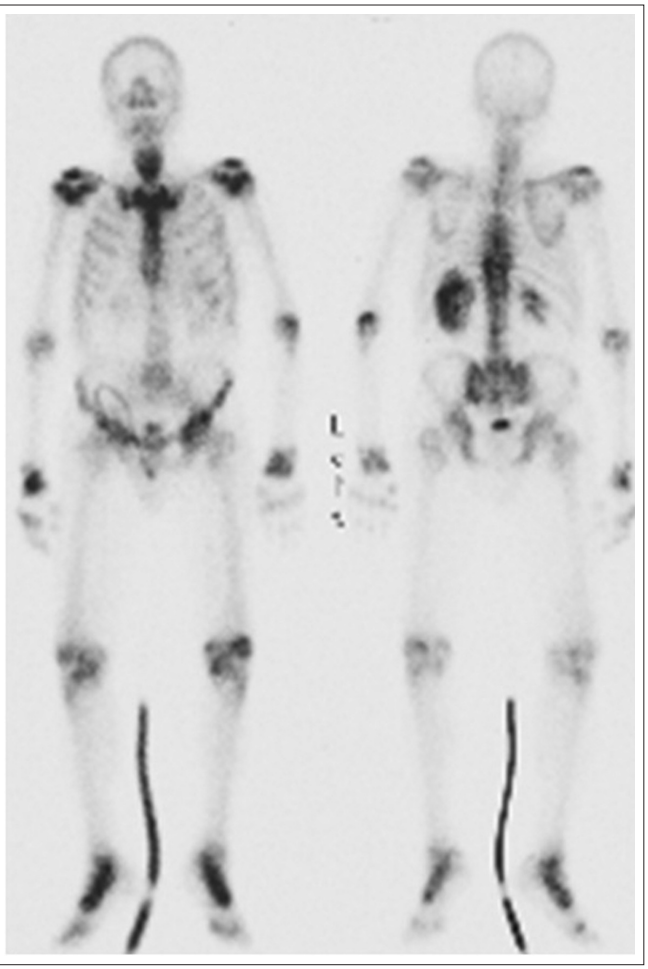

Fig. 1.
^{99m}Tc bone scintigraphy, indicating abnormal uptake in the bilateral shoulder, wrist, knee and ankle joints.

Our patient had atypical features including the impaired improvement after treatment with moderate doses of corticosteroid. Atypical PMR is a significant risk for bone and joint involvement by cancer, which should be specifically assessed (6). Paraneoplastic PMR usually identified by temporal association between the onset of myalgia and diagnosis, although the strongest evidence of a true cause-and-effect relationship has not been established (7). In our case, after resection of neoplasma, muscloskeletal symptoms were completely resolved and we can hypothesise that in our patient, PMR was a paraneoplastic manifestation. The mechanism of the association PMR with neoplasms is still uncertain, but soluble factors produced by the tumour could be involved. Inflammatory cytokines such as IL-6 and TNF-α which are involved in rheumatic articular inflammation can be secreted by neoplasms (8). Sibilia *et al*. observed elevated serum levels of IL-6 and IL-2 in 2 cases of RS$_3$PE syndrome, a disease entity related to PMR, associated with prostatic adenocarcinoma (9). Interesting, the elevated serum levels of IL-6 in the present case was normalised after surgical tumour resection. These clinical courses seen in our case suggest an underlying tumour-related immunological processes are involved in rheumatic manifestations. Physicians should consider an associated malignancy in PMR when patients present with atypical features, such as profound weight loss or incomplete response to corticosteroids.

Y. YASUNAGA, *MD*[1]
T. MIYASHITA, *MD*[1]
J. MAKIYAMA, *MD*[3]
T. KOGA, *MD*[1]
Y. IZUMI, *MD*[1]
A. KITAZATO, *MD*[2]
S. KOBAYASHI, *MD*[2]
H. FUJIOKA, *MD*[2]
A. MATSUMOTO, *MD*[3]
M. ITO, *MD*[4]
K. MIGITA, *MD*[5]

[1]Department of Rheumatology and General Internal Medicine, [2]Department of Surgery [3]Department of Gastroenterology, [4]Department of Pathology, [5]Clinical Research Center, NHO National Nagasaki Medical Center, Omura, Nagasaki, Japan.

Address correspondence to:
Kiyoshi Migita MD, Clinical Research Center, NHO Nagasaki Medical Center, Kubara 2 1001-1, Omura 856-8652, Japan.
E-mail: migita@nmc.hosp.go.jp

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