A Case of Malignant Melanoma with Multiple Myeloma

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Malignant melanoma is an uncommon tumor in Korea. To the best of our knowledge, we could not find malignant melanoma with multiple myeloma in Korean literature.

A 57-year-old male patient had a 4×5 cm sized, irregular bordered, dark brownish plaque on the left sole, which has extended gradually since about 1 year ago and showed an occasional bleeding tendency. Laboratory examinations revealed a low hemoglobin level, rouleaux formation on peripheral blood, monoclonal gammopathy of IgG-kappa type and Bence-Jones proteinuria. Bone marrow aspiration findings showed markedly increased immature plasma cells suggesting multiple myeloma. Histopathologic findings of the skin biopsy from the left sole revealed proliferation of atypical melanocytes.

We performed a surgical excision with a skin graft for malignant melanoma and chemotherapy (melphalan, vincristine and prednisolone) for multiple myeloma.

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Key Words: Malignant melanoma, Multiple myeloma

Malignant melanoma is an uncommon tumor in Korea. The incidence of cutaneous malignant melanoma represents about 1-3% of all cancers[1], and annual incidence of multiple myeloma is around 3 per 100,000 population[2]. We found two cases of malignant melanoma with incidentally occurred multiple myeloma in the report of Bellet et al[3], but could not find any similar case in the Korean literature.

We report a case of malignant melanoma with multiple myeloma.

REPORT OF A CASE

A 57-year-old male visited our out-patient clinic in January 21, 1991 with a pigmented plaque on the left sole. A small pigmented macule was developed on the left sole about 1 year ago. His skin lesion has been gradually extended and occasionally bled since 6 months ago.

Past and family history were not contributory.

Clinical examination revealed a 4×5cm sized, irregular bordered, dark brownish plaque covered with crusts on the left sole (Fig. 1) and no enlargement of inguinal lymph nodes.

Systemic reviews and physical examinations were within normal limits except anemic conjuncitive and the skin lesion.

Laboratory examinations showed the findings of multiple myeloma. There was a decreased hemoglobin level (9.6g/dl) and leukocyte count (4,100/mm^3) on the complete blood count, and rouleaux formation on the peripheral blood. The serum levels of total protein (13.8g/dl), blood urea nitrogen (20mg/dl) and creatinine (1.8mg/dl) were increased. Protein electrophoresis and immunoelectrophoresis findings on the serum showed monoclonal gammopathy of IgG-kappa type, and protein electrophoresis and immunoelectrophoresis findings on the urine revealed Bence-Jones proteinuria of kappa type (Fig. 2, 3). Bone mar-

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row aspiration findings showed markedly increased immature plasma cells of 32% (Fig. 4). On the Tc99mm methyl diphosphonate bone scan, abnormal bone lesions in calvarium and poor renal function were observed (Fig. 5).

Histopathologic findings of the skin biopsy from left sole were marked hyperkeratosis, parakeratosis, proliferation of atypical melanocytes in the epidermis and upper dermis (Fig. 6, 7).

The diagnoses of malignant melanoma and multiple myeloma were made on the basis of clinical features and histopathologic findings in the former, bone marrow aspiration and immunologic findings in the latter.

We treated him by performing a surgical excithe sion with a skin graft for malignant melanoma of left sole at the department of plastic surgery. We also gave chemotherapy 7 times, composed of melphalan (daily 8mg, P.O., for 7 days), vincristine (1.5mg, I.V., for 1 day) and prednisolone (daily 45mg, P.O., for 7 days) every 4 weeks at the department of internal medicine. At present we are following up this patient.

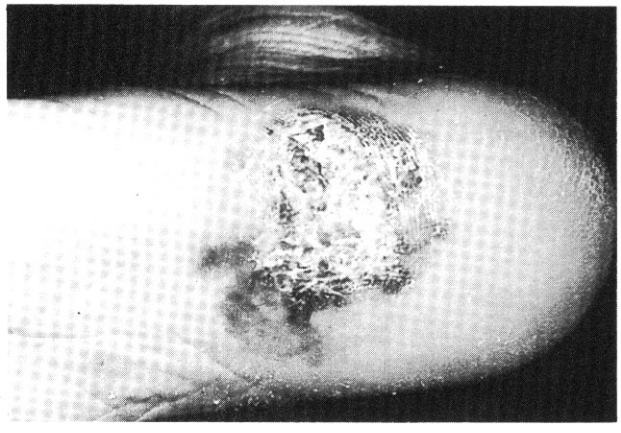

Fig. 1. A 4×5cm sized, irregular bordered, dark brownish plaque covered with crusts on the left sole.

DISCUSSION

The incidences of malignant melanoma and multiple myeloma in Korea are unknown, but both tumors occupied about 0.48%[4] and 0.3%[5] of all malignant tumors, respectively.

Multiple myeloma have been reported as the malignant tumors frequency accompanying acute leukemia and lymphoma after chemotherapy[6]. Weitzel[7] reported that the incidence of multiple myeloma accompanying other epithelial tumors was higher than that of other hematopoietic tumors. Hosley[8] reported the cases of multiple myeloma coexisting with other carcinoma, and suggested that the reasons for the coexistance of these tumors were uncertain, but the genetic defects and causative carcinogens were the same for these tumors. Fraser et al[9] and Boland et al[10] reported the prevalence of non-melanocytic malignant neoplasms in patients with malignant melanoma, and suggested that the immune surveillance of host to formation of tumors was weakened in these patients. Bellet et al[3] reported that non-melanocytic, non-cutaneous malignant tumors occurred in 22 of 281 patients with cutaneous malignant melanoma, among which there were 2 cases of multiple myeloma. But the association of cutaneous melanoma and additional non-cutaneous malignancies appeared to be a random event. In our case, malignant melanoma with

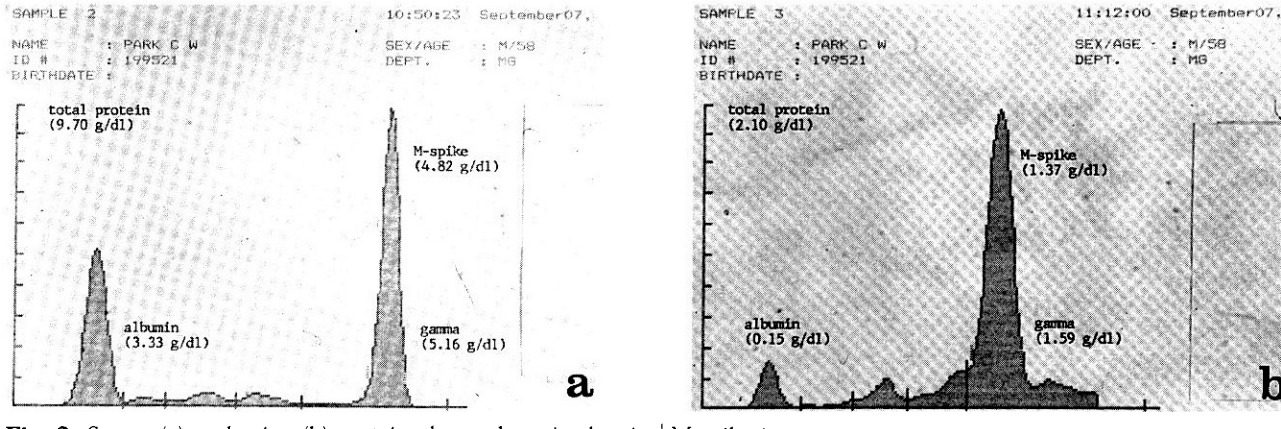

Fig. 2. Serum (a) and urine (b) protein electrophoresis showing M-spike in gamma-region.

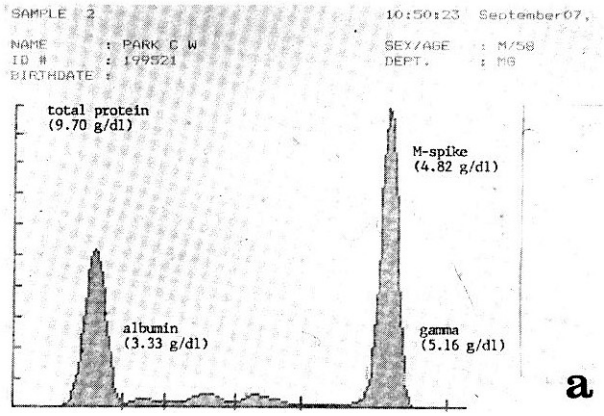

Fig. 3. Immunoelectrophoresis showing IgG-kappa type on serum and Bence-Jones protein of kappa type on urine.

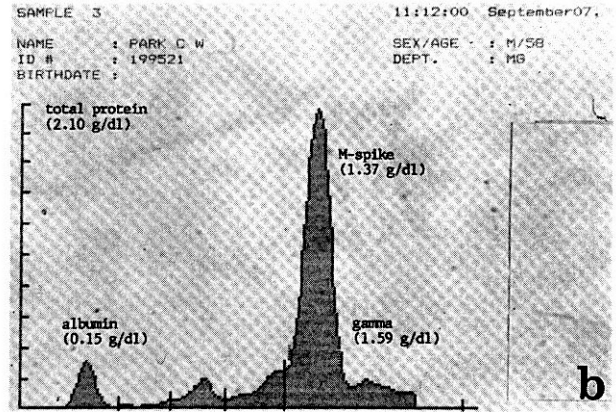

Fig. 4. Bone marrow aspiration revealed marked proliferation of immature plasma cells.

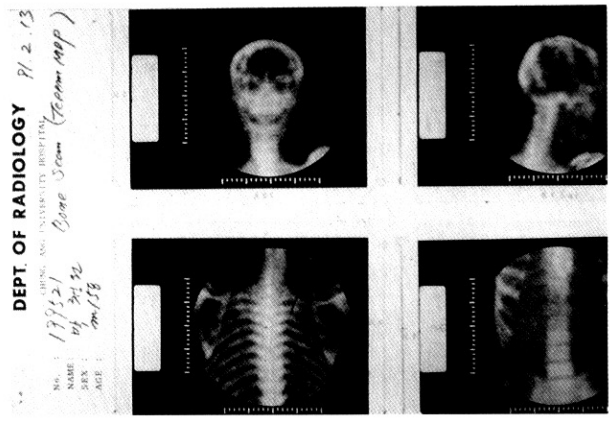

Fig. 5. Tc99m methyl diphosphonate bone scan showing abnormal bone lesions in calvarium and poor renal function.

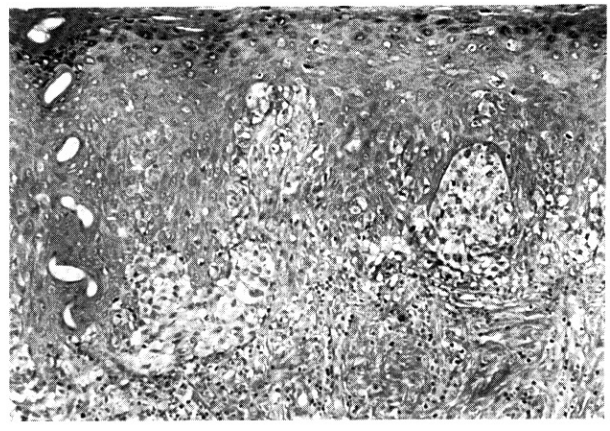

Fig. 6. Atypical melanocytes showing upward extension in the epidermis and downward proliferation into the dermis (H&E stain, ×100).

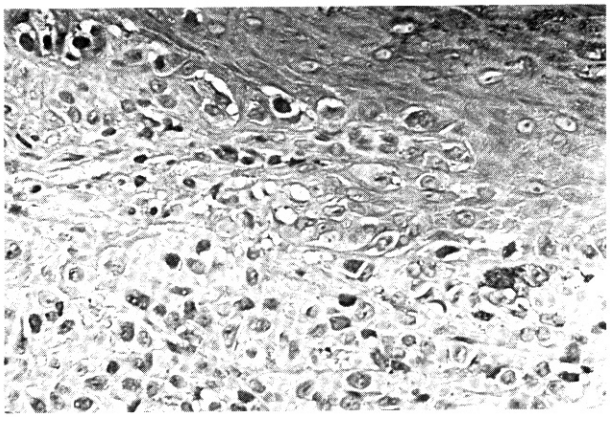

Fig. 7. Proliferation of atypical melanocytes in the upper dermis (H&E stain, ×400).

multiple myeloma was concurrently diagnosed, and we could not find the evidence of association between these two tumors. We think that the relation of two diseases should be persued on the immunological and genetic aspect.

We think that our case had an acral lentiginous type of malignant melanoma. In our case malignant melanoma has not so far recurred since the surgical excision with a skin graft. The death rate of multiple myeloma is about 15% per year[11]. The standard treatment of multiple myeloma has consisted of intermittent pulse therapy of an alkylating agent (melphalan, cyclophosphamide or chlorambucil) and prednisolone for 4 to 7 days every 4 to 6 weeks[2]. At present our case is being treated with intermittent chemotherpy composed of melphalan, vincristine and prednisolone for 7 days every 4 weeks, and is in a remission state.

We report a rare case of malignant melanoma with multiple myeloma.

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