Psoriasis Guttata in Association with Hepatocellular Carcinoma

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Sir,
Psoriasis is uncommon as a paraneoplastic dermatosis. In this report, we describe a case of psoriasis guttata associated with hepatocelluar carcinoma. Psoriasis of this case is considered to be a dermadrome of hepatocellular carcinoma. This is the first report of psoriasis guttata associated with internal malignancy.

CASE REPORT

A 50-year-old Japanese man with no history of psoriasis noticed skin eruptions on the scalp and neck in June, 1999. The eruptions began to spread to the body and the extremities in January, 2000, when lymphadenopathy in the left cervical and axillary region also appeared.

He was referred to our department and clinical examination revealed scaly erythema and scaly erythematous papules on the scalp, face, neck and upper chest, and up to fingertip-sized erythematous scaly plaques on the abdomen, back and extremities. Several thumb-sized lymph nodes in the left cervical and supraclavicular regions, and a fist-sized lymph mass in the left axillary region were palpable.

Skin biopsy specimens taken from the small erythematous scaly plaque in the abdomen were pathognomonic of psoriasis. A biopsy specimen taken from the cervical lymph node showed many atypical cells. Laboratory data showed liver dysfunction (LDH 1058 IU/l, GOT 116 IU/l, GPT 128 IU/l, γ-GTP 81 IU/l), elevated levels of protein induced in vitamin K absence (PIVKA-II) (439 mAU/ml, normal <40), positive hepatitis Be (HBe)

Table I. *Reported cases of psoriasis as a paraneoplastic dermatosis*

Type of neoplasm	Age/sex	Type of psoriasis	Psoriasis appeared at onset of the neoplasm	Flare up of pre-existing psoriasis	Psoriasis regressed after treatment[a]	Psoriasis exacerbated when neoplasm relapsed or metastasized	Reference no.
Breast cancer	70F	PV	+		+		1
Hodgkin's disease	31F	NA	+				1
Breast cancer	72F	NA		+	+	+	1
Colon adenocarcinoma	75M	NA	+		+		1
Colon adenocarcinoma	72F	NA	+		+		1
Thyroid adenocarcinoma	61F	PV	+		+		2
Prolactinoma	29F	PV		+	+[b]	+	3
Prolactinoma	24F	PV		+	+[b]	+	3
Prolactinoma	24F	NA		+	+[b]	+	3
Gastric cancer	54M	PV	+		+		4
Gastric cancer	53M	NA		+	+		5
Hepatocellular carcinoma	61M	PV	+	+	+	+	6
Small cell lung cancer	72M	PV	+				7
Gastric cancer	26F	PV		+			8
Malignant lymphoma	64M	PV	+		+		9
Gastric cancer	66M	PV				+	10
Hepatocellular carcinoma	50M	PG	+			+	Our case

PV: psoriasis vulgaris, PG: psoriasis guttata, NA: not available.
[a]Regression of psoriasis which are assumed to be caused by chemotherapy are excluded.
[b]In cases of prolactinoma, therapy with bromocriptine reduced the serum prolactin levels and psoriasis also regressed simultaneously.

antigen and positive hepatitis B surface (HBs) antigen and antibody.

Abdominal ultrasonography revealed three low echoic lesions in the liver, and computed tomography revealed multiple lymphadenopathy in the left cervical, supraclavicular and axillary regions and the para-aortic region. Liver biopsy findings were consistent with chronic hepatitis and hepatocelluar carcinoma. He was diagnosed as having psoriasis guttata and hepatocellular carcinoma with metastasis to multiple lymph nodes. Topical corticosteroid ointments were applied for psoriasis and the skin lesions gradually began to improve. The carcinoma, however, continued to progress despite therapies and the patient died in June, 2000.

DISCUSSION

In our case, psoriatic lesions appeared for the first time at the age of 50 with no history of psoriasis, and were exacerbated in association with the progression of a hepatocellular carcinoma. Psoriasis was therefore considered to be a dermadrome of hepatocellular carcinoma.

Psoriasis is uncommon as a paraneoplastic dermatosis and is not usually included in the list of paraneoplastic dermatoses in the literature. However, there are several reports in which psoriasis developed at the onset of a tumour, improved after the tumour treatment, or recurred or was exacerbated when the tumour relapsed or metastasized. We reviewed previous reports (1–10). All the previous cases were psoriasis vulgaris (if stated) and only our case was psoriasis guttata (Table I). The type of psoriasis might depend on the underlying mechanism.

A possible mechanism of the development of psoriasis associated with malignant tumours is that some tumour cells may produce growth factors and cytokines with potent stimulatory effects on epidermal keratinocytes, such as tumour necrosis factor-α, transforming growth factor-α and epidermal growth factor (11, 12), may express superantigens that can directly bind to the MHC receptors, resulting in a T-cell proliferative response (13, 14), or may share common antigens with the epidermis or the basement membrane zone of the skin (15).

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