derlying pathogenesis which needs further elucidation (9, 10).

ADDENDUM IN PROOF

Since submission of this article for publication, KEMMETT et al. reported two other cases in British Medical Journal 1988: 297, 1513–1514.

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Transient Acantholytic Dermatosis Associated with Lymphomatous Angioimmunoblastic Lymphadenopathy

BRIAN D. ZELICKSON,[1] AYALEW TEFFERI,[2] MORIE A. GERTZ,[2] PETER M. BANKS[3] and MARK R. PITTELKOW[1]

[1]*Department of Dermatology,* [2]*Division of Hematology and Internal Medicine, and* [3]*Section of Surgical Pathology, Mayo Clinic and Mayo Foundation, Rochester, Minnesota, USA*

Transient acantholytic dermatosis is a papulovesicular cutaneous eruption first described in 1970. There have been subsequent reports of similar disorders occurring in patients with malignancy. Angioimmunoblastic lymphadenopathy with dysproteinemia is a disorder characterized by an acute onset of generalized lymphadenopathy associated with fever, malaise, pruritus, night sweats, and hepatosplenomegaly. The patient described had a papular acantholytic dermatosis associated with the development of angioimmunoblastic lymphadenopathy with dysproteinemia-like T-cell lymphoma. The cutaneous manifestations of angioimmunoblastic lymphadenopathy with dysproteinemia are discussed. ***Key words: Grover's disease; Acantholysis; Polyclonal hypergammaglobulinemia.***

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M. R. Pittelkow, Department of Dermatology, Mayo Clinic, 200 First Street SW, Rochester, MN 55905, USA.

Several different dermatoses display acantholysis. This loss of coherence between epidermal cells may be a result of primary disruption of the intercellular substance or induced by an alteration in the structural integrity of keratinocytes. Examples of the disruption of intercellular substance include pemphigus, and examples of an alteration of keratinocytes are Hailey-Hailey disease, Darier's disease, and warty dyskeratoma.

In 1970, Grover (1) described six patients with transient pruritic papulovesicles that were mostly localized to the trunk and histologically showed acantholysis. Subsequently, other primary acantholytic disorders with histologic similarities to Grover's disease have been reported. Some of these have been related to malignancy (2, 3), actinic damage (4), or ionizing radiation (5).

The clinicopathologic entity of angioimmunoblastic lymphadenopathy with dysproteinemia (AILD) was first described 15 years ago (6) and recently has been extensively reviewed (7). It is a lymphoproliferative disorder that usually occurs in the elderly and is characterized by an acute onset of generalized lymphadenopathy associated with fever, malaise, pruritus, night sweats, hepatosplenomegaly, and cutaneous eruption. Laboratory abnormalities include an elevat-

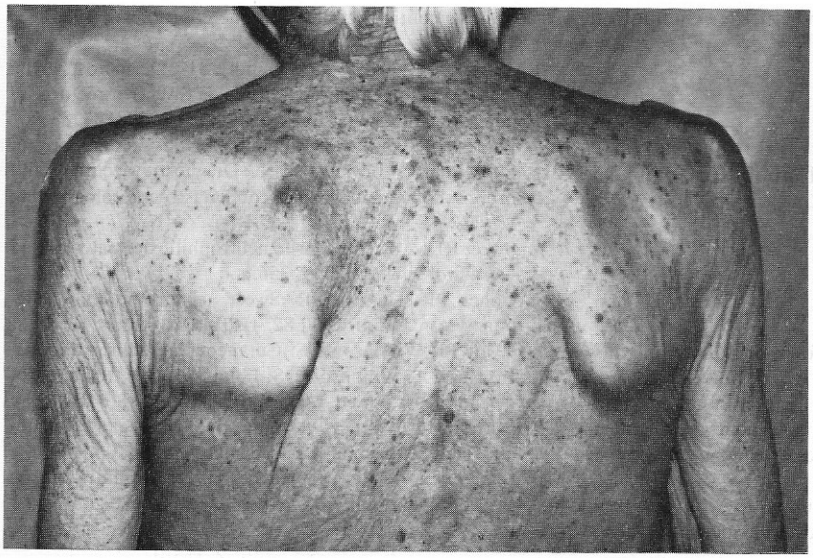

Fig. 1. Keratotic erythematous papulovesicles on upper part of back.

ed sedimentation rate, polyclonal hypergammaglobulinemia, and positive Coombs' test results. Recent studies have demonstrated clonal T-cell receptor gene rearrangement in this disorder (8–10), and its distinction from peripheral T-cell lymphoma, which has similar histologic and clinical features, has become problematic (11).

Cutaneous eruptions have been described in approximately 50% of patients with AILD (12), yet none of these have shown acantholysis on histologic study.

We describe a patient with a papular acantholytic dermatosis associated with the development of AILD-like T-cell lymphoma.

CASE REPORT

A 73-year-old woman had an acute onset of generalized pruritus associated with night sweats, fatigue, generalized lymphadenopathy, and hepatosplenomegaly. Biopsy of several lymph nodes revealed the histologic features of AILD. The patient had no history of weight loss, atopy, recent travel, contact factors, or sun or drug exposure. She had recently developed burning and blistering of her left leg and foot and had noticed scattered papular lesions on the upper part of her back (Fig. 1); both of these features occurred within a week after the onset of her illness.

Physical examination was remarkable for generalized lymphadenopathy and hepatosplenomegaly. Cutaneous examination revealed multiple flesh-coloured, hyperkeratotic papules, some on an erythematous base located over the upper part of the back and shoulders. Multiple intact and ruptured hemorrhagic vesicles and bullae were present in a zosteriform distribution on her left leg following the L5 and S1 dermatomes, and a Tzanck smear confirmed herpes zoster.

On laboratory examination the patient had a hemoglobin value of 82 g/l and a leukocyte count of 8.0×10^9/l with a monocytosis of 16%. Her chemistry panel was normal with the exception of a depressed albumin value of 29 g/l and an elevated total protein concentration of 88 g/l. Her sedimentation rate was 148 mm in 1 hour. Total hemolytic complement and C3 levels were depressed at 6 units (normal: 25 to 70 units) and 0.46 g/l (normal: 0.88 to 2.06 g/l), respectively. The total thyroxine level was normal. Serum protein electrophoresis revealed a polyclonal elevation of γ-globulin of 53.3 g/l (normal: 7 to 16 g/l). Immunoglobulins A, M, and G were all elevated at 13.7 g/l (normal: 0.6 to 4), 53.6 g/l (normal: 0.6 to 3), and 39.4 g/l (normal: 7 to 15), respectively. The total 24-hour urinary protein value was 0.857 g (normal: 0.027 to 0.093 g/24 hours) and consisted of albumin and globulin with κ and λ light chains in a polyclonal pattern. Computed tomography of the abdomen and pelvis documented splenomegaly and retroperitoneal adenopathy.

Axillary lymph node biopsy revealed morphologic features of AILD progressing into frankly malignant lymphoma. Nodal architecture was effaced by an intimate intermixture of epithelioid venules and heterogeneous lymphoid cells, including clusters of large clear-cell immunoblasts, plasma cells, eosinophils, and small atypical lymphocytes with wrinkled nuclear membranes. Frozen section immunostains showed the majority of cells to react to pan-T antigens CD-3 and CD-5 and to helper T-cell subset antigen CD-4. Cytogenetic analysis performed on lymph node tissue showed 12 normal metaphases, 3 metaphases with trisomy 3, and 5 metaphases with 48 chromosomes that had several unbalanced structural abnormalities. Genetic probe studies of lymph node tissue with a Southern blot method revealed evidence of clonal rearrangement of the gene for the β-chain of the T-cell receptor; this finding confirmed a monoclonal T-cell lymphoproliferative disorder.

Bone marrow biopsy showed decreased marrow reserves containing sheets of large atypical lympoid cells, increased eosinophils and plasma cells, and mild fibrosis. The plasma

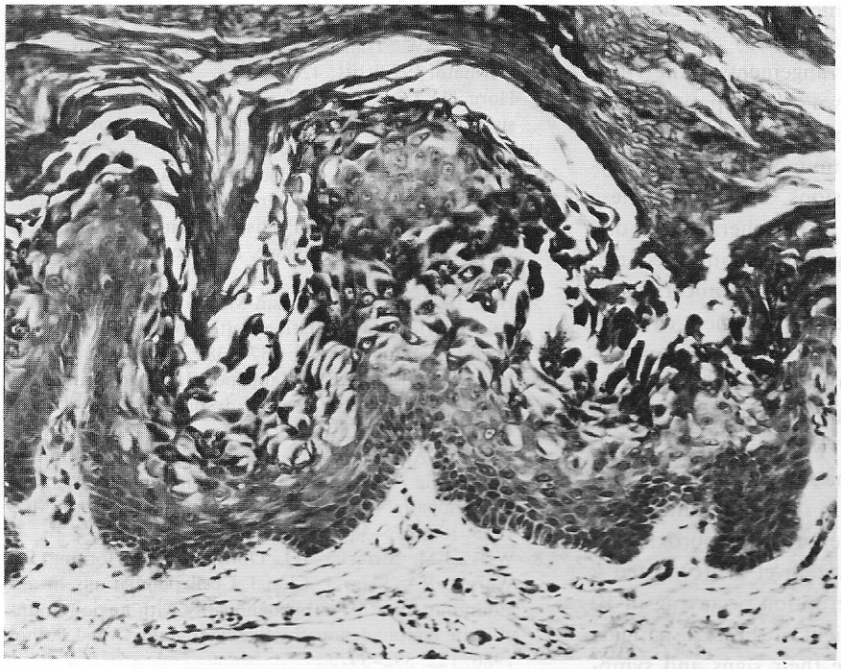

Fig. 2. Histologic section, showing acantholytic blister formation with a few corps ronds. (Hematoxylineosin; ×230.)

cells in the bone marrow stained positive for both κ and λ light chains in a polyclonal pattern.

Skin biopsy revealed focal parakeratosis with impetiginization, intraepidermal cleft formation, acantholytic cells, and scattered corps ronds. Acantholysis was most prominent in the mid and upper portions of the epidermis (Fig. 2). Minimal lymphocytic perivascular infiltrate and absence of tissue eosinophilia also were noted.

Corticosteroid therapy (80 mg/day) was initiated. At 4 months the patient's adenopathy and anemia had resolved, her activity level was significantly improved, and her skin disease had resolved, and she continued taking prednisone (10 mg/day).

COMMENT

This case report presents a patient with transient acantholytic dermatosis associated with AILD. We believe the coexistence of these two rare disorders is not coincidental because of the temporal relationship between the onset and resolution of the cutaneous disorder and the activity of the AILD. Our case differs from the original cases described by Grover (1) in that our patient was older and had an underlying lymphoproliferative process. The patient did experience generalized pruritus, yet it was not accentuated in the area involving her acantholytic disease. However, the distribution, clinical appearance, course, and histologic features of her dermatosis were similar to those in Grover's cases. Three of the six patients described by Grover displayed some type of pathergy: two with prior ultraviolet exposure and one with prior contact dermatitis. Similar pathergy was not obvious in our case.

Our patient is similar to the four patients described by Horn & Groleau (2). All of their patients were immunocompromised, and two had acute nonlymphocytic leukemia and were bedridden, febrile, and afflicted with a papulovesicular eruption on their trunk and extremities. Their patients were taking numerous medications, yet none was an obvious precipitating factor. Heat and sweating noted in febrile patients have been related to transient acantholytic dermatosis (13, 14). Although acantholytic disorders such as pemphigus have been associated with malignancy, no definitive evidence links these diseases to the neoplastic process (15).

The diagnosis of AILD must be confirmed by lymph node histologic study that reveals architectural effacement with the characteristic features of vascular proliferation, polymorphous lymphoid cytology including immunoblasts, and an interspersion of inflammatory cells. Immunophenotypic analysis of lymph node biopsy specimens in AILD reveals a predominance of activated T lymphocytes and a minority population of polyclonal B cells (8). The hyper-

gammaglobulinemia is presumed to result from polyclonal B cells secondarily activated by abnormal T-cell function (16). Clonal rearrangements of the T-cell receptor genes have been shown in most patients with AILD and lymphomas developing from AILD (8–10). These findings, along with immunophenotypic analysis of surface antigen expressions, suggest that these disorders are clonal diseases of peripheral T-cell origin. Most patients have an aggressive clinical course, whereas some experience an indolent clinical course with prolonged survival. The most frequent cause of death is infection, and progression into frank malignant lymphoma occurs in 20% to 50% of cases. Our patient fulfilled the clinical and morphologic criteria for AILD in the first biopsy with apparent progression to overt T-cell lymphoma in the second biopsy.

Cutaneous involvement in angioimmunoblastic lymphadenopathy has been reported in approximately 50% of patients (12). Frizzera et al. (6) noted a generalized maculopapular eruption occurring in 10 of 24 patients with AILD. Eight of these 10 patients had skin involvement before their signs and symptoms of AILD. The cause of these rashes was thought to be drug-related. Seehafer et al. (17) reviewed 22 patients with AILD who were seen at the Mayo Clinic between 1962 and 1978. Six patients (27%) had associated skin lesions. The eruption was part of the initial symptom complex in all six patients. The cutaneous findings were a generalized erythematous maculopapular eruption (three patients), generalized petechial lesions (two patients), or generalized erythema with purpura (one patient). Pruritus was present in four of the six patients. The histopathologic finding was that of lymphohistiocytic vasculitis in all cases. Of 148 cases of AILD reviewed by Bernstein et al. (12), 44% were noted to have a nonspecific dermatitis. Of these, 91% had a maculopapular eruption most often preceding the clinical symptoms, and 9% had purpuric lesions or severe generalized pruritus without a clinical eruption.

To our knowledge, no previous cases of an acantholytic dermatosis accompanying AILD have been reported. Transient papular acantholytic dermatosis is a characteristic eruption recognized in association with malignancy. Other precipitating factors such as sun or drug exposure also have been identified. Cutaneous eruptions occur in approximately 30% to 50% of patients with AILD and can include the development of transient acantholytic dermatosis.

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