A Japanese Gentleman with Reticulate Pigmentation

Dr. T. Y. Ho

CASE SUMMARY

History
A 52-year-old Japanese businessman who had been staying in Hong Kong for the past 16 years complained of an asymptomatic pigmented rash at his axillae, buttocks, back, arms and thighs since teenage. The extent of the skin rash was slowly progressing over the years.

The patient enjoyed good health all along. He had a neck mass excised more than 20 years ago in Japan. The exact diagnosis was not known. There was no family history of similar pigmentation. His two siblings and his two teenage sons were not affected.

Physical examination
A reticulate hyperpigmented macular rash was present at the axillae, groins, extensor aspect of the upper limbs, buttocks, and thighs (Figure 1). Poikilodermatous changes were observed, with hypopigmented macules, epidermal atrophy and telangiectasia (Figure 2). Erythematous patches with epidermal atrophy were also seen, especially over the abdomen and chest (Figure 3). There were no mucosal lesions, palmar pits or nail dystrophy. No lymph nodes were palpable and hepatosplenomegaly was not detected.

Differential diagnoses
The differential diagnoses include mycosis fungoides and its variants, collagen vascular diseases like dermatomyositis and lupus erythematosus, and poikiloderma-like cutaneous amyloidosis. Genodermatoses with reticulate hyperpigmentation, and pigmented disorders which are more commonly seen in Japanese are also considered, in view of the early onset and ethnicity. The former include Dowling-Degos disease, dyskeratosis congenita, Rothmund-Thompson syndrome, Bloom’s syndrome, Weary & Kindler syndrome, and Kindler syndrome. The latter consists of dyschromatosis universalis, prurigo pigmentosa and reticulate acropigmentation of Kitamura.

Investigations
Complete blood picture, liver, renal and thyroid function tests were normal. Blood smear for Sezary cells was negative. Anti-nuclear factor was present at a titre of 1/160, with a speckled pattern. Anti-DNA and anti-
ENa antibodies were absent. Immunoglobulin pattern showed a mildly raised IgG of 1892 mg/dL (819-1725 mg/dL). No monoclonal immunoglobulin was detected by serum electrophoresis. Bence-Jones protein was negative in urine. Chest X-ray and ultrasound sonography of the abdomen did not reveal any abnormalities.

**Histology**

The first skin biopsy was taken at the thigh where poikilodermic changes were prominent. A lichenoid reaction with focal epidermal atrophy and telangiectasia (poikilodermatous change) was present. Prominent epidermotropism by atypical lymphoid cells with pericellular halo was noted. Some of these lymphoid cells were large in size with irregular nuclear outline. T-cell receptor gene rearrangement study by polymerase chain reaction showed a dominant band in a reactive background. Congo red and crystal violet stains for amyloid deposit were negative.

A second skin biopsy taken from an erythrodermic patch at the chest showed an atrophic epidermis with elongated rete ridges and a vague band-like lymphocytic infiltrate in the papillary dermis. Prominent epidermotropism with atypical lymphoid cells was again noted. Large Pautrier's microabscesses were absent but there were aggregates of atypical lymphoid cells. T-cell receptor gene rearrangement revealed an abnormal band identical to the band in the previous biopsy.

**Diagnosis**

Mycosis fungoides, stage IB.

**Treatment**

The patient was started on PUVA therapy.

**REVIEW ON STAGE IB MYCOSIS FUNGOIDES**

**Poikilodermatous mycosis fungoides and poikiloderma atrophicans vasculare**

The salient feature in this patient was the long-standing history of the poikilodermatous lesions which were present for more than 25 years. It cannot be ascertained whether the poikilodermatous lesions started as premycotic lesions which later evolved to mycosis...
fungoides, or whether the lesions represented a slow progressing form of mycosis fungoides.

Samman studied 107 patients with poikiloderma atrophicans vasculare ("prereticulotic poikiloderma" or "atrophic parapsoriasis"). In about one-fifth, the age of onset was less than 20 years old. From studying the first 50 cases in the series, it was observed that the condition could remain non-progressive for many years: three patients progressed to mycosis fungoides or reticulosis, five died (one due to mycosis fungoides and one due to leukaemia), four had complete resolution, and 28 remained more or less static, including 11 in whom the condition present for more than 20 years.

Prognosis of stage IB mycosis fungoides

Mycosis fungoides is usually staged using the TNM classification (Table 1 and 2). Kim et al studied the long-term outcome of 176 patients with generalized patch and/or plaque stage (T2) mycosis fungoides. Most subjects were treated with topical nitrogen mustard or total skin electron beam therapy (TSEBT). The relative risk of death compared with race, age and sex-matched controls was 2.3 (95% C.I. 1.9-2.8). The calculated survival rates at five, 10 and 20 years were 73%, 55% and 27%, respectively. Patients who were younger than 58 years old had longer median survival than older ones (18.2 years vs 7.1 years). Nineteen percent of the deaths were due to mycosis fungoides. Disease progression occurred in 24% of patients in stage IB. There was no significant difference between the survival rates of those with stage IB and IIA disease.

In van Doorn et al's series, 135 patients were diagnosed as stage IB mycosis fungoides, with a median age of 61 at diagnosis. The majority were treated with psoralen plus ultraviolet-A (PUVA) phototherapy. The overall survival at 10 years was found to be 61% with a disease-specific survival of 83%. Thirty percent had complete remission on initial therapy. Progression to a more advanced stage occurred in 24%. The survival rate of stage IB patients was found to be the same as stage IA patients. The study also found that complete remission on initial treatment was significantly related to survival in stage IB patients.

Table 1. TNM classification for mycosis fungoides

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
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<tbody>
<tr>
<td>T (Skin)</td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td>Limited patch/plaque (&lt;10% of total skin surface)</td>
</tr>
<tr>
<td>T2</td>
<td>Generalized patch/plaque (&gt;10% of total skin surface)</td>
</tr>
<tr>
<td>T3</td>
<td>Tumours</td>
</tr>
<tr>
<td>T4</td>
<td>Generalized erythodema</td>
</tr>
<tr>
<td>N (Nodes)</td>
<td></td>
</tr>
<tr>
<td>N0</td>
<td>Lymph nodes clinically uninvolved</td>
</tr>
<tr>
<td>N1</td>
<td>Lymph nodes enlarged, histologically uninvolved</td>
</tr>
<tr>
<td>N2</td>
<td>Lymph nodes clinically uninvolved, histologically involved</td>
</tr>
<tr>
<td>N3</td>
<td>Lymph nodes enlarged and histologically involved</td>
</tr>
<tr>
<td>M (Viscera)</td>
<td></td>
</tr>
<tr>
<td>M0</td>
<td>No visceral involvement</td>
</tr>
<tr>
<td>M1</td>
<td>Visceral involvement</td>
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</tbody>
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Table 2. Clinical staging system for mycosis fungoides

<table>
<thead>
<tr>
<th>Clinical stages</th>
<th>T</th>
<th>N</th>
<th>M</th>
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<tbody>
<tr>
<td>IA</td>
<td>T1</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>IB</td>
<td>T2</td>
<td>N0</td>
<td>M0</td>
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<tr>
<td>IIA</td>
<td>T1-2</td>
<td>N1</td>
<td>M0</td>
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<tr>
<td>IIB</td>
<td>T3</td>
<td>N0-1</td>
<td>M0</td>
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<tr>
<td>IIIA</td>
<td>T4</td>
<td>N0</td>
<td>M0</td>
</tr>
<tr>
<td>IIIB</td>
<td>T4</td>
<td>N1</td>
<td>M0</td>
</tr>
<tr>
<td>IVA</td>
<td>T1-4</td>
<td>N2-3</td>
<td>M0</td>
</tr>
<tr>
<td>IVB</td>
<td>T1-4</td>
<td>N2-3</td>
<td>M1</td>
</tr>
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Treatment options for stage IB/T2 mycosis fungoides

Phototherapy

PUVA is the most popular choice of phototherapy in the treatment of mycosis fungoides. Herrmann et al achieved a 59% complete clinical & histological response rate, and a 35% partial response rate with PUVA in 49 stage IB patients. The average dose to initial clearing was 140 J/cm². The freedom from relapse rate at five years was 25%.

Broadband UVB was able to induce complete clinical response in 83% of six stage IB patients with patch lesions in Ramsay et al's study. However, it was not able to induce remission in any patients with plaque lesions. The median time to remission was five months, and the median duration to relapse was 22 months.

Narrowband UVB achieved a complete clinical response in 75-83% for stage IA/B patients with patch lesions. The mean time to complete clearance was short, within 10 weeks. However, the relapse rates were
high. In Hoger et al’s study, all patients relapsed within five months.  

Zane et al used UVA1 (340-400 nm) at a dose of 100 J/cm² five times per week. 8 An 88% complete clinical and histological response was achieved in eight stage IB patients. Twenty-nine percent relapsed during a mean follow-up duration of 7.2 months, but they responded to a second course of UVA1 treatment.

**Topical corticosteroids**
Zackheim et al documented the efficacy of topical corticosteroids for the treatment of early stage mycosis fungoides. 9 The complete remission rate for stage T1 and stage T2 patients were 63% and 25% respectively, and the corresponding partial remission rates were 31% and 57%. Temporary depression of serum cortisol occurred in 13%, and was more common among T2 patients.

**Other single therapy**
For T2 mycosis fungoides, topical nitrogen mustard and carmustine had complete response rates of 26% and 48%, respectively. 10, 11 Total skin electron beam therapy cleared all lesions in 92% of stage IB patients 12 and 71% of T2 patients. 13 Systemic retinoids are rarely used on their own in the treatment of mycosis fungoides. A novel RXR-selective retinoid, bexarotene, is undergoing phase three trial for early stage mycosis fungoides which were resistant to other forms of therapy. 14 Other modalities, such as interferon-α, systemic chemotherapy, photopheresis and photodynamic therapy are not usually used in the initial treatment of early stage mycosis fungoides.

**Combination therapy**
Aggressive treatment with multiple modalities is sometimes used, for example a combination of oral isotretinoin, interferon-α, TSEBT and nitrogen mustard. 15 Whether this approach will have any benefits on long-term survival over less toxic single therapy in the treatment of early stage mycosis fungoides remains to be determined.

**Learning points:**
Mycosis fungoides should be included in the differential diagnoses for poikilodermic lesions, even for cases with early onset, as the condition can remain non-progressive for many years.

**References**

Many translated example sentences containing "reticulate" – Japanese-English dictionary and search engine for Japanese translations. [...] primarily of polyvinyl alcohol, PVA gel has a porous, reticulate structure that can trap and carry microorganisms. kuraray.co.jp. kuraray.co.jp. αƒäƒ½/¼f«Π/¼fœå€²å„³åššåº¹ç™½åœ–å“•å‰‘ç€ŒæŒ±è€š…å½“å‘¾åŒæ±¾åƒ½/¼f«åŠ™æ€†, kuraray.co.jp. kuraray.co.jp. ãƒç™½ã€‘ kuraray.co.jp. Hereditary condition characterized by acral blistering Pigmentation Regimen - Find Out Which Deciem Products To Use For Pigmentation And Routines & Regimens For All Skin Types & Concerns. Alpha Arbutin is a water-based serum that helps fades dark spots and pigmentation. It can be used in the morning and evening by applying just a couple of drops to cleansed skin. Once you feel the Alpha Arbutin has been absorbed, you can apply the next product. According to the data in the Japanese study, lipid nanoparticles were found in the whole blood circulating throughout the body within four hours, and then settled in large concentrations in the ovaries, bone marrow and lymph nodes. Malone said there needed to be monitoring of vaccine recipients for leukemia and lymphomas as there were concentrations of lipid nanoparticles in the bone marrow and lymph nodes. But those signals often don't show up for six months to nine years down the road, he said. Usually, signals like this are picked up in animal studies and long-term clinical trials, but this didn't happen with mRNA vaccines, Malone said. There are two adverse event signals that are becoming apparent to the U.S. Food and Drug Administration (FDA). A 21-year-old Chinese man presented with four years history of recurrent itchy erythematous papules and reticulated hyperpigmentation over the upper back and chest wall. The diagnosis of prurigo pigmentosa was made. Treatment with oral doxycycline resulted in reduction of pruritus and no emergence of new lesions. THE INVISIBLE JAPANESE GENTLEMEN There were eight Japanese gentlemen having a fish dinner at Bendey's. They spoke to each other rarely in their incomprehensible tongue, but always with a courteous smile and often with a small bow. All but one of them wore glasses. Sometimes the pretty girl who sat in the window beyond gave them a passing glance, but her own problem seemed too serious for her to pay real attention to anyone in the world except herself and her companion. She had thin blonde hair and her face was pretty and petite in a Regency way, oval like a miniature, though she had a harsh way of speaking â€” perhaps the accent of the school, Roedean or Cheltenham Ladie's College, which she had not long ago left.