LETTERS TO THE EDITOR

Two Cases of Morphea Associated with Hashimoto’s Thyroiditis

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Sir,
The cause of morphea, or localized scleroderma, is
unknown, but an autoimmune mechanism is likely to
be involved. Patients with morphea have an increased
incidence of autoimmune disorders, such as alopecia
areata, vitiligo, systemic sclerosis, lichen sclerosus et
atrophicus or lichen planus, and autoantibodies of vari-
ous types (1). Thyroid dysfunction is also commonly
found in systemic sclerosis (2, 3), but only rarely has
this been associated with morphea. We report here on
two cases of morphea in patients with onset or previous
Hashimoto’s thyroiditis. These cases suggest that the
development of morphea is associated with an auto-
imune mechanism and that an evaluation of the thy-
roid function should be performed in morphea patients.

CASE REPORT

Case 1
A 27-year-old woman presented with a 5-year history
of a slightly tender, enlarging indurated plaque on her
left forearm. On examination, her forearm exhibited
shiny, sclerotic and atrophic plaque with a violaceous
border. The past history of the patient was non-
contributory, and relatives of the patients were not
known to suffer from any autoimmune disorders.

The concentration of thyroid-stimulating hormone
(TSH) was elevated (7.21 μIU/ml; normal 0.27–4.05),
but the concentrations of total thyroxine (T4) and total
tri-iodothyronine (T3) were within normal limits.
Scintigraphy of the thyroid gland using 99mTcO4−
showed decreased uptake. Antithyroglobulin antibody
titre was elevated (1:400; normal <1:100), and the
antimicrosomal antibody titre was 1:100. Other rou-
tine laboratory examinations showed no obvious
abnormalities.

Case 2
A 42-year-old woman with hypothyroidism presented
with a 3-month history of a sclerotic plaque on the
right forearm. Examination revealed indurated plaque
with a smooth surface. She had been diagnosed with
Hashimoto’s thyroiditis 8 years previously, but her
present thyroid indices including T4, T3 and TSH were
normal, with the supplementation of levothyroxine
at 0.1 mg/day. Laboratory investigations, including
antinuclear antibody and anti-SCL 70 antibody showed
no obvious abnormalities.

Biopsy specimens of both patients showed irregularly
arranged, thickened and hyalinized collagen bundles in
the reticular dermis and a patchy inflammatory infiltrate,
predominantly lymphocytic admixed with plasma cells,
in the dermis and subcutaneous fat. Collagen prolifera-
tion and inflammatory infiltrate thickened the trabecu-
le of the subcutaneous fat and displaced the atrophic eccrine
glands up to the mid-dermis.

Under the diagnosis of morphea and hypothyroidism,
patient 1 received oral sodium levothyroxine 0.1 mg/day
and intralesional injections of triamcinolone. Patient 2
received oral prednisolone and intralesional injections
of triamcinolone.

DISCUSSION
Systemic sclerosis is frequently associated with thyroid
dysfunction or anti-thyroid autoantibodies, especially in
patients with familial or a personal history of thyroid
disease (2, 3). However, the simultaneous occurrence of
morphea and autoimmune thyroiditis has rarely been
described (4, 5). Thyroid hormones act in nuclear
receptors of human fibroblasts and intermediate the
regulation of collagen synthesis and degradation. The
coexistence in both patients of two autoimmune diseases
may not have occurred by chance, but could be attrib-
uted to autoimmune reactions elicited by the recognition
of common antigens.

In our patients, the clinical course of morphea showed
no correlation with the degree of thyroid dysfunction,
and it is suggested that the level of thyroid hormone in
thyroid disorders has no correlation with the course of
the morphea lesion.

The cases described here are of interest because they
enlarge the spectrum of morphea subsets that could be
associated with Hashimoto’s thyroiditis, even if the
pathologic link between the two diseases remains specu-
lative at the moment. Interestingly, both of our patients
had morphea of the plaque type. It is not certain at
present whether a specific type of morphea is more
frequently associated with thyroid dysfunction.

REFERENCES
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incidence of auto-immune disorders in patients with local-
Urticaria and Anaphylaxis Due to Sting by an Ant (*Brachyponera chinensis*)

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Sir,

*Brachyponera chinensis*, a winged ant, has a wide distribution in Japan (1) and its sting is known to cause a local reaction. The systemic reaction to the sting, however, is rare. We therefore report the case of anaphylaxis caused by the sting of *B. chinensis*.

CASE REPORT

A 20-year-old Japanese male noticed eruptions 2 h after receiving a sting on the buttock by an ant. On visiting our clinic, physical examination revealed extensive urticaria without any signs of anaphylaxis, such as dyspnea, hypotension or sweating. He had been repeatedly stung by the ant until onset of urticaria. Prednisolone (100 mg with 500 ml D.I.V. for 2 h) was administered, but shortly after this infusion he exhibited anxiety and dyspnea. His blood pressure was 78/52, indicating that his condition had progressed to anaphylaxis. He was immediately given i.v. volume expander, oxygen supply and soluble methyl-prednisolone (total 1500 mg). Fifteen minutes later his blood pressure recovered to 114/76 and he was admitted to our hospital. On the next day, his course was uneventful. Later, the patient brought some of the ants to us for examination. They had wings and were identified as *B. chinensis*. His titres of specific IgE were as follows: yellow jacket; 0.34 UA/ml, honeybee; <0.34 UA/ml, long-legged wasp (*Polistes*); 34.9 UA/ml (UA = unit allergen).

DISCUSSION

*B. chinensis* is an ant which has wings during the reproductive period, especially from June to September in Japan. It belongs to the order Hymenoptera, family Formicidae and genus *Euponera*, and is widely distributed in Japan, China, Taiwan and New Zealand (1). These ants live in rotten wood, and in Japan they can be found in old wooden houses. It is thought that the venom of *B. chinensis* contains hyaluronidase, phospholipase A2, histamine, amines, formic acid and terpenoid (2). The venom of the fire ant has been analysed in detail, but that of *B. chinensis* has not been fully investigated. The sting of *B. chinensis* induces local reactions such as pain, warmth and angioedema. In Japan, however, only one case of anaphylaxis caused by the sting of *B. chinensis* has been reported (3). We believe that being repeatedly stung by this kind of ant sensitized the patient to the venom, and that the final sting induced a systemic reaction such as anaphylaxis. Although we could not examine whether the patient had specific IgE to the *B. chinensis*, he showed a positive reaction to the venom of the long-legged wasp, belonging to the order Hymenoptera. It is therefore speculated that the antigens of venom of *B. chinensis* cross-react with antigen of the long-legged wasp. Further investigation is needed to analyse the venom of *B. chinensis*. There is a report from the USA that fire ants cause not only a local reaction but also anaphylaxis (4). The sting of *B. chinensis* is one of the causes of anaphylaxis in Japan, Taiwan, China and New Zealand.

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REFERENCES