

LICHEN PLANUS, THYMOMA AND MYASTHENIA GRAVIS

K Pavithran

A 42-year-old female had myasthenia gravis secondary to thymoma. She developed lichen planus which erupted simultaneously with the early signs and symptoms of myasthenia gravis. The association of thymoma and lichen planus in the present case, seems to be causal rather than fortuitous.

Key words : Lichen planus, Thymoma, Myasthenia gravis.

The cause of lichen planus is still a subject for debate. Various hypotheses include infectious (viral) origin, immunologic abnormalities, neurologic changes and emotional stress.^{1,2} Recent immunological, histopathological and fluorescent studies favour the immune nature of lichen planus.³⁻⁷ It has been reported in association with various systemic diseases in which immunological mechanisms play an important role.^{8,9} We report a case of lichen planus in a middle aged female who had associated myasthenia gravis and thymoma. The skin lesions of lichen planus in this patient erupted simultaneously with the early signs and symptoms of myasthenia gravis.

Case Report

A 42-year-old female was seen for intensely pruritic and pigmented skin lesions which erupted gradually on the chest, arms and legs since 7 months. Along with the eruption of skin lesions, she developed recurrent transient bilateral ptosis, dyspnoea in the supine position, drooping of the mandible with weakness on mastication and profound fatigability after moderate exertion. The ptosis was intensified when the patient gazed upwards. External ocular muscles were not affected and the pupillary and tendon reflexes were normal. A clinical diagnosis of myasthenia gravis was made. It was confirmed by intravenous administration of 10 mg edrophonium chloride which relieved the signs and symptoms of myasthenia gravis in one minute,

though these returned after 10 to 12 minutes. Routine laboratory tests on blood, urine and stools were normal except an increase in ESR (34 mm). Blood VDRL and LE cell tests were negative. X-ray of the chest, in its lateral and PA views showed a lobulated soft tissue mass in the normally translucent area of the anterior superior mediastinum. Based on the clinical findings, a diagnosis of thymoma with myasthenia gravis was made. She had only a partial response to 15 mg neostigmine bromide 4 times a day orally. Thymectomy performed later revealed a well-differentiated lympho-epitheliomatous tumour with a good fibrous capsule. After thymectomy, the signs and symptoms of myasthenia gravis were well controlled by 30 mg of neostigmine bromide given orally in two divided doses. The skin lesions seen by the dermatologist, were multiple, violaceous papules and plaques on the front of the chest, arms and legs. Some of the plaques had characteristic Wickhams striae. The diagnosis of lichen planus was confirmed by histopathological study that showed hyperkeratosis, hypergranulosis, acanthosis and basal cell degeneration in the epidermis and a band-like lymphocytic infiltration in the upper dermis. She was treated with topical corticosteroid ointment that gave partial relief.

Comments

A number of thymic abnormalities are associated with autoimmune diseases, agammaglobulinemia and lymphoreticular malignancy in man. Alarcon-Segovia et al¹⁰ reported a case of

From the Department of Dermato-Venereology, Medical College Hospital, Kottayam-686 008, India.

systemic lupus erythematosus which followed thymectomy for myasthenia gravis. Adult thymectomy in the mouse leads to a fall in the suppressor T cell population, thereby increasing the response to T-independent antigens.¹¹ Antibodies against smooth muscles and striated muscles have been demonstrated in patients with myasthenia gravis.¹² Myasthenia gravis occurs in about 50% of patients with thymoma. The exact mechanism of development of myasthenia gravis by thymoma is not well understood. Thymus may in such cases be producing a toxic substance which acts on the myoneural junction.¹³

The present case had all the classical signs and symptoms of myasthenia gravis and investigations revealed the presence of a thymic tumour. The cause of lichen planus is uncertain, though there is evidence that immunological processes play a role in its development. Tan in 1974 reported a case of ulcerative colitis in a 38-year-old female who later developed myasthenia gravis, alopecia areata, vitiligo and lichen planus.¹² He suggested that the association of these separate disorders was not necessarily fortuitous and there might be some basic defect in the patient's immunologic status whereby multiple autoimmune conditions arose. A case of thymoma associated with acquired hypogammaglobulinemia, lichen planus and alopecia areata has also been reported.¹⁴ Histopathology of the skin lesion in that case showed increased number of Civatte colloid-like bodies, not only in the dermo-epidermal junction, but also throughout the epidermis and even in the horny layer. He suggested that these unusual histopathological features might be related to the fact that lichen planus had developed on a background of impaired immunity in that patient. In our patient, histopathology of the skin lesion did not reveal these colloid-hyaline Civatte like bodies. Wyatt⁸ reported 3 patients with ulcerative colitis who had associated lichen planus and suggested that both diseases origin-

ated by some immunological process. The occurrence of lichen planus and thymoma in the same patient might sometimes be expected by chance. Simultaneous onset of skin lesions of lichen planus and the signs and symptoms of myasthenia gravis due to thymoma in our patient poses the question of a common factor.

References

1. Samman PD : Lichen planus and lichenoid eruptions, in : Text Book of Dermatology, Vol II, Third ed, Editors, Rook A, Wilkinson DS and Ebling FJG : Blackwell Scientific Publications, London, 1979; p 1483-1502.
2. Arndt KA : Disorders of the dermis and dermo-epidermal interface, in : Dermatology in General Medicine, Second ed, Editors, Fitzpatrick TB, Eisen AZ, Wolff K et al : Mc Graw-Hill Book Company, New York, 1979; p 655-702.
3. Sobel S, Miller R and Shatin II : Lichen planus pemphigoides : immunofluorescence findings, Arch Dermatol, 1976; 112 : 1280-1283.
4. Baart de la Faille-Kuyper EH and Baart de la Faille-Kuyper H : An immunofluorescence study of lichen planus, Brit J Dermatol, 1974; 90 : 365-371.
5. Abell E, Presbury DGC and Marks R : The diagnostic significance of immunoglobulin and fibrin deposition in lichen planus, Brit J Dermatol, 1975; 93 : 17-24.
6. Saurat JH, Bussel A, Didearjean L et al : Lichen planus like eruption after bone marrow transplantation, Brit J Dermatol, 1975; 93 : 675-681.
7. Stanler L : Deficiency of Ig A and Ig M in adult patients with lichen planus, Brit J Dermatol, 1975; 93 : 25-27.
8. Wyatt EH : Lichen planus and ulcerative colitis, Brit J Dermatol, 1975; 93 : 465-468.
9. Feuchtmann EJ and Sandbark M : Lichen planus pemphigoides with extensive melanosis: Occurrence in a patient with malignant lymphoma, Arch Dermatol, 1971; 104 : 61-67.
10. Alarcon-Segovia D, Galbraith RF, Maldonado JE et al : Systemic lupus erythematosus following thymectomy for myasthenia gravis, Lancet, 1963; 2 : 662-665.
11. Roitt IM : Essential Immunology, The English Language Book Society and Blackwell Scientific Publications, London, 1978; p 87.
12. Tan RS-H : Ulcerative colitis, myasthenia gravis, atypical lichen planus, alopecia areata, vitiligo, Proc Roy Soc Med, 1974; 67 : 195-196.
13. Bannister R : Brains' Clinical Neurology, The English Language Book Society and Oxford University Press, London, 1973; p 328.
14. Tan RS-H : Thymoma, acquired hypogammaglobulinemia, lichen planus, alopecia areata, Proc Roy Soc Med, 1974; 67 : 196-198.