Alopecia areata associated with idiopathic primary hypophysitis

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Summary
Alopecia areata has been reported in association with various autoimmune diseases. Idiopathic primary hypophysitis is an organ specific autoimmune disease affecting the pituitary gland. We report a case of alopecia areata occurring in a patient of idiopathic primary hypophysitis. The constellation of the two diseases can be explained by autoimmunity, which is a major aetiologic factor in both diseases. To the best of our knowledge, this is the first report of such an association.

Report
Alopecia areata is a disease of multifactorial aetiology of which autoimmunity is the most important.1 Idiopathic primary hypophysitis is an uncommon disease with autoimmunity as one of the aetiologic factors, in which the pituitary gland is infiltrated by lymphocytes, plasma cells and macrophages and its function is usually impaired. In primary hypophysitis, the inflammation is confined to the pituitary gland with no identifiable systemic involvement elsewhere. Primary hypophysitis can be associated with other autoimmune endocrine or nonendocrine disorders.2 We describe a patient with primary hypophysitis who also developed alopecia areata.

A 38-year-old female presented for the first time 2 years ago with complaints of headache and visual field defects. Following extensive work up, which included magnetic resonance imaging (Fig. 1), the patient was diagnosed as having nonfunctional pituitary adenoma. She underwent trans-sphenoidal excision of the pituitary lesion. The histopathology report of the lesion was consistent with granulomatous hypophysitis and it showed epithelioid cell granulomas and giant cells (Fig. 2). There was neither caseous necrosis nor any acid-fast bacilli. The patient was further evaluated for evidence of any other granulomatous disease as a cause for this pathology. Her work up included computerised tomographic scan of the chest, calcium profile, thyroid microsomal antibody titre, angiotensin converting enzyme levels and immunostaining for histiocytosis X. There was no clinical or laboratory evidence of any other granulomatous diseases. Post-operatively, she developed panhypopituitarism. She was started on replacement therapy, which included prednisolone, thyroxine, oestrogen and progesterone and desmopressin.

The patient was referred to department of dermatology when she suddenly noticed a patch of hair loss. She had a previous history of similar patchy hair loss in the occipital region almost 5 years ago which improved with some topical treatment given by a dermatologist. On examination, she had a single patch of alopecia measuring about 3 × 4 cm in size located on the frontoparietal region of the scalp. There was no evidence of any scarring or atrophy. The patch had regular borders and short broken hairs were present at the margins. She was diagnosed as having alopecia areata and started on topical betamethasone dipropionate lotion and minoxidil 2% lotion. Follow-up at 3 months showed almost complete regrowth of hair and no new patches. There have been no new episodes of alopecia and she is under follow-up in the endocrinology department for her primary hypophysitis.

Alopecia areata has been described in association with a number of autoimmune diseases including vitiligo, pemphigus,3 Hashimoto’s thyroiditis,4 diabetes mellitus,5 lichen planus,6 systemic lupus erythematosus,7 primary biliary cirrhosis, chronic atrophic gastritis, etc.8 Primary hypophysitis is histologically classified into three types: lymphocytic hypophysitis, granulomatous...
hypophysitis and xanthomatous hypophysitis. It is unclear whether these are truly distinct entities or only different expressions of the same disease. They share clinical and radiologic features and can only be distinguished from each other by the histologic examination. Lymphocytic hypophysitis is believed to have a strong autoimmune aetiology.\(^2\) Granulomatous hypophysitis can present as a manifestation of a specific disease such as syphilis, tuberculosis, sarcoidosis, brucellosis and histiocytosis X. When such specific aetiologies are excluded, there still remains a small group of patients in whom the granulomatous disorder is of unknown origin and in whom there is no systemic involvement with the granulomas apparently restricted to the pituitary gland; these cases are labelled idiopathic and probably have an autoimmune aetiology.\(^2,9\) As it is well known that autoimmune diseases can occur together, the constellation of alopecia areata occurring in our patient with primary hypophysitis can be explained on the basis of autoimmunity. Even though one review article mentions that alopecia can occur in association with lymphocytic hypophysitis,\(^2\) a detailed search of the literature failed to reveal any report of association of alopecia areata with primary hypophysitis.

This is probably the first reported case of alopecia areata in a patient with idiopathic primary hypophysitis.

References