SHORT REPORT

Lymphocytic hypophysitis

Anthony Jabre, Remedios Rosales, James E Reed, Edward L Spatz

Abstract

A male patient with lymphocytic hypophysitis is reported on. Lymphocytic hypophysitis is a rare disease that may mimic pituitary adenoma and occurs mostly in women in the peripartum period. Only six other cases have been reported in men. Optimal treatment is unclear from the literature, as the results have been inconsistent and the reported cases few. The patient described here was successfully treated by means of transphenoidal surgery and a one year course of treatment with cortisone acetate.

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Lymphocytic hypophysitis is a rare inflammatory disease in which lymphocytic infiltration of the pituitary gland can potentially lead to panhypopituitarism. This entity was first recognised in 1962 by Goudie and Pinkerton.[1] Review of the literature shows that most reported cases have occurred in women during pregnancy or the postpartum period.[2] Many were accurately diagnosed only after operation or at necropsy. Only six cases have been recognised in men.[3] We present a further case of a 25 year old man with lymphocytic hypophysitis.

Clinically and radiologically, lymphocytic hypophysitis may mimic a non-secretory pituitary adenoma although hyperprolactinemia can occur.[4] It is suspected to be an autoimmune endocrinopathy as concomitant lymphocytic infiltration of the thyroid and pituitary glands has been noted and antipituitary antibodies have been found in some instances.[4]

Case report

A twenty five year old man presented with a four week history of unremitting headache associated with nausea and vomiting. His medical history was unremarkable; specifically he had no personal or family history of autoimmune disease. He had no diabetes insipidus. His neurological examination was non-focal. Brain MRI disclosed a pituitary mass lesion with central necrosis and a suprasellar extension raising the chiasm (figure).

The visual field examination was within normal limits and endocrine testing showed a raised prolactin concentration at 310 ng/ml (normal 0-25 ng/ml), a low cortisol concentration at 0.45 μg/dl (normal 6-29 μg/dl), and a borderline low testosterone concentration and thyroid function. He was started on steroids with prompt and complete resolution of his presenting symptoms.

He underwent surgery through a sublabial transphenoidal approach. The bony floor of the sella seemed thick and on entering the pituitary fossa a capsule was identified and opened, rapidly releasing a gelatinous yellowish fluid. The consistency of the mass lesion was quite firm. It was adherent to its capsule and could only be excised by tedious curettage.

Postoperatively he did well and was discharged on a maintenance dose of cortisone acetate. The pathology specimen submitted from surgery disclosed dense inflammatory infiltrate consisting primarily of lymphocytes, plasma cells, and a few eosinophils. There were lymphoid aggregates, moderate fibrosis, and some nests of pituitary cells. Immunohistochemical staining showed some prolactin positive cells. Leucocyte common antigen was very positive in the mononuclear infiltrate with UCHL1 (T cell marker) positive in most of the mononuclear cells and L26 (B cell marker) positive in a few. Special stains for microorganisms, including periodic acid Schiff and methionine silver, were all negative. Ultrastructural studies showed only inflammatory cells. There were no granules or Langerhans bodies. On the basis of these features, the diagnosis of lymphocytic hypophysitis was made.

One year after surgery he remained asymptomatic and his MRI disclosed a normal pituitary gland; Endocrine testing showed normal hormonal concentrations. He was then instructed to discontinue the cortisone acetate. He remains well, as noted on a follow up visit two years after the steroid treatment was discontinued.

Discussion

Lymphocytic hypophysitis is an inflammatory disease that may be associated with an autoimmune process affecting other organs such as the thyroid, parathyroid, and adrenal glands.[1–3] Identical ultrastructural features have been noted between lymphocytic hypophysitis and granulomatous hypophysitis suggesting that

Division of Neurosurgery and Division of Neuropathology, Veterans Administration Medical Center and Boston University Hospital, Boston, Massachusetts, USA
A Jabre
R Rosales
J E Reed
E L Spatz

Correspondence to:
Dr Anthony Jabre, Boston University Hospital, Doctors Office Building, Suite 710, 720 Harrison Avenue, Boston, Massachusetts 02118, USA.

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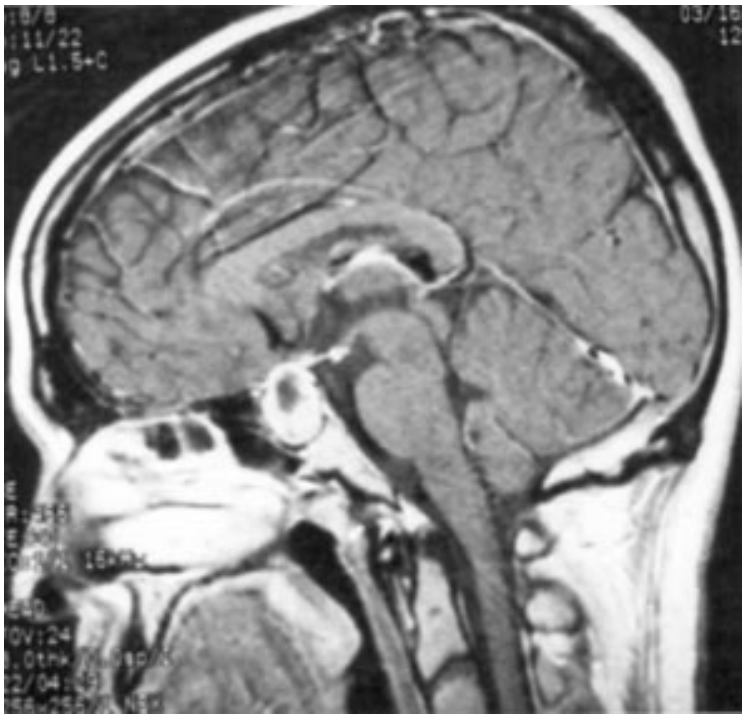

Preoperative sagittal T1 weighted gadolinium enhanced MRI showing an enhancing mass in the pituitary fossa with suprasellar extension and central necrosis. Note the normal "bright spot" in the tuber cinerium, similarly seen on a non-enhanced T1weighted study and thought to represent an ectopic posterior pituitary.

both entities could represent the same autoimmune disease at different ends of the range.[5]

Lymphocytic hypophysitis is increasingly being suspected as a disease entity in cases of women presenting with hypopituitarism during the peripartum period.[1 2] None the less, symptoms may occur after the menopause.[5] When lymphocytic hypophysitis is seen in men, headache and decreased libido are the most common presenting symptoms.[3] Brain MRI cannot always differentiate lymphocytic hypophysitis from pituitary adenoma. However, some features such as dural enhancement or extrapituitary involvement within the subarachnoid space may favour the first. The diagnosis of lymphocytic hypophysitis is best established histologically, based on lymphocytic infiltration of the gland, oedema, and fibrosis of various degrees of severity.[2] There are no specific biochemical or serological markers. Furthermore antipituitary antibodies can be expected to be positive in 18% of women during the postpartum period.[6]

The natural history is unclear, but it is thought that if left untreated, the gland may be eventually destroyed by the inflammatory process. The patients reported in the literature have had different outcomes, some progressed to panhypopituitarism whereas others recovered.[2 5 6]

The optimal therapy for patients with lymphocytic hypophysitis is ill defined in the literature. Corticosteroids can cause a dramatic relief of the patient's symptoms,[5] as noted in our patient. For some, corticosteroids have been successful in decreasing lesion size and in promoting hormonal recovery by reducing lymphocytic infiltration of the pituitary gland; possibly offering a therapeutic alternative in cases of incomplete surgical resection or postoperative recurrence.[6] For others corticosteroids have not been beneficial. Transphenoidal surgery has been performed in most cases with the provisional diagnosis of pituitary adenoma.[3 5] In some cases surgery has been performed after progression of lymphocytic hypophysitis despite steroid treatment or after discontinuing steroid treatment.[6]

Conclusion

Lymphocytic hypophysitis seems to be related to an autoimmune process . It is a rare entity that may mimic pituitary adenoma and occurs mostly in women in the peripartum period. Only seven cases, including this one, have been reported in men. Transphenoidal surgery is usually required to establish diagnosis. The natural history has varied in the literature and spontaneous regression of the lesion in some cases and complete destruction of the pituitary gland in other cases have both occurred. The optimal therapy is unclear from the review of literature, as the results have been inconsistent and the reported cases relatively few.

We have been successful in treating the rare case of a man with lymphocytic hypophysitis, by means of transphenoidal surgery and a one year course of steroid therapy.

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