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Case report

Lymphocytic adenohypophysitis: magnetic resonance imaging features of two new cases and a review of the literature

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Summary

Lymphocytic adenohypophysitis can cause pituitary expansion and hypopituitarism closely mimicking the features of a pituitary adenoma. Discrimination between these two conditions is of importance since, despite the similarity of their presentation, there are significant differences in pathophysiology. In contrast to pituitary adenoma, lymphocytic adenohypophysitis occurs almost exclusively in young women in relation to pregnancy, there is a preference for destruction of ACTH and TSH secreting cells and computed tomographic scanning shows uniform contrast enhancement in a proportion of cases. There is, as yet, no proven specific non-surgical treatment. There are anecdotal reports of a beneficial effect of steroids but there is also evidence that spontaneous resolution may occur. We have reviewed the literature and report two new cases of lymphocytic adenohypophysitis both of whom exhibited early striking diffuse homogeneous contrast enhancement on magnetic resonance imaging scanning which we suggest may be a diagnostic feature of this condition.

Lymphocytic adenohypophysitis is an uncommon condition characterized by a dense polyclonal lymphocytic infiltration of the adenohypophysis, usually related to pregnancy. Its presentation is very like that of an expanding pituitary adenoma and this, along with its relative rarity, means that it is frequently misdiagnosed as such, and its incidence is likely to be underestimated. Discrimination of lymphocytic adenohypophysitis from pituitary tumour is however of clinical importance since a review of reported cases shows a propensity in the former to adrenocortical insufficiency with obvious clinical implications and, furthermore, some evidence of spontaneous resolution that perhaps indicates a conservative approach to pituitary surgery. The presumed autoimmune aetiology has led to the suggestion that steroids might be of benefit and several patients have received steroids as replacement therapy or incidently to induce foetal lung maturation. We report on two cases of lymphocytic adenohypophysitis presenting recently to our unit and review the literature in order to try to gain further insight into the natural history of this interesting condition and, in particular, to try to elucidate features helpful in discrimination from pituitary adenoma.

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Case 1

A 24-year-old West Indian woman without significant past medical history completed an uneventful pregnancy. There were no obstetric complications; in particular, no post-partum haemorrhage or sepsis. Three days post partum she developed severe frontal headaches, anorexia, nausea, vomiting and had difficulty with lactation such that she was unable to breast-feed her infant. Five days later she noticed some difficulty with vision and sought medical advice. She was found to have a complete symmetrical bitemporal hemianopia. Magnetic resonance imaging (MRI) showed a large isodense pituitary mass extending into the suprasellar space compressing the optic chiasm (Fig. 1a). Administration of gadolinium contrast medium showed that this mass exhibited marked early uniform contrast enhancement (Fig. 1b). Biochemical assessment showed an undetectable random serum cortisol (< 30 nmol/l), prolactin 388 mIU/l, LH < 0·5 IU/l, FSH 3·1 IU/l, GH 5·4 mIU/l, IGF-I 39·5 nmol/l (14·6–73·2), TSH 0·2 mU/l (0·3–5·5), free T3 7·7 pmol/l (2·6–8·0), free T4 8·3 pmol/l (11·0–25·0). She was thought to be suffering from a pituitary adenoma and transsphenoidal decompression was performed. At operation the pituitary mass was noted to be tough and fibrous unlike a pituitary adenoma. Histology showed anterior pituitary tissue heavily infiltrated by lymphocytes with a few