Autoimmune hypophysitis causing permanent diabetes insipidus - a case report

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Autoimmune hypophysitis is a rare cause of pituitary failure. Its aetiology and natural history are not well understood. We present a case of pituitary failure that showed spontaneous resolution of radiological and clinical features, consistent with autoimmune hypophysitis. Case report: An 18 year old male presented with a 7 month history of polyuria and headaches. No significant past medical history or family history were noted. A water deprivation test confirmed cranial diabetes insipidus and he was commenced on DDAVP. Further endocrine testing showed suppressed gonadotrophins and testosterone (1.8 nmol/l) and an elevated prolactin (all of which had been normal on presentation). During insulin hypoglycaemia, growth hormone response was low (<5 mU/l) and cortisol response was borderline. However 12 months later gonadotrophins had risen to within the normal range and testosterone was 10.9 nmol/l. Prolactin was within normal limits. An insulin tolerance test confirmed normal anterior pituitary function, although diabetes insipidus persists. Initial pituitary imaging showed thickening of the infundibulum and pituitary stalk but repeat scanning showed an improvement, with no residual thickening of the pituitary stalk. This case with transient pituitary failure is likely to represent autoimmune hypophysitis that has resulted in permanent diabetes insipidus. The transient hyperprolactinaemia would be consistent with pituitary stalk disconnection syndrome that appears to have resolved. Transient hypophysitis is a rare autoimmune condition that can present with various abnormalities of endocrine function. This may recover spontaneously, so regular review is required. The permanent diabetes insipidus probably reflects permanent loss of secretion of AVP.