Sterile Pituitary Abscess associated with Hypophysitis and Panhypopituitarism

Case Report

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Introduction:
Pituitary abscess is rare. The incidence is difficult to estimate but two papers indicated numbers < 1% and 0.6% of all cases of pituitary disease. We present a patient with panhypopituitarism without diabetes insipidus sharing a cystic mass in the pituitary gland.

Case History:
A man aged 47 was referred with symptoms of intense, frontal headache since a few months, fatigue and erectile dysfunction with decreased sexual desire. There was no visual impairment.

Hormonal workup revealed panhypopituitarism without diabetes insipidus.

MRI of the brain showed an inhomogeneous, enlarged pituitary gland with a central cystic lesion (fig.1).

Hormone replacement was started, without subjective clinical benefit and severe headaches remained.

Hypothesis:
Because of the combination of acute and complete failure of the pituitary gland with intense, continuous headache, the hypothetical diagnosis of hypophysitis was made.

On the MR images, features of hypophysitis (meningeal thickening and thickened, enhancing pituitary stalk) were confirmed.

Treatment:
Treatment with high dose corticosteroids (64mg methylprednisolone) was started. With this treatment the headaches disappeared immediately, however, when the corticosteroids were reduced and stopped, the severe headaches re-occurred and treatment had to be restarted. Surgical resection of the cystic lesion and a diagnostic pituitary biopsy were proposed. A sterile pituitary abscess was found and hypophysitis was confirmed.

Continuation:
After surgery, headaches remained, and a control MRI showed an unchanged or recurred cystic pituitary lesion. High dose corticosteroid therapy (64mg methylprednisolone) was reinstalled with disappearance of complaints and normalization of pituitary imaging, after which corticosteroid were tapered and stopped. Partial recuperation of hormonal function was established.

Conclusion:
Diagnosing pituitary abscess before surgery is very difficult, if not impossible. This patient combined panhypopituitarism based on hypophysitis in the presence of a sterile pituitary abscess.