Sterile Pituitary Abscess associated with Hypophysitis and Panhypopituitarism Case Report

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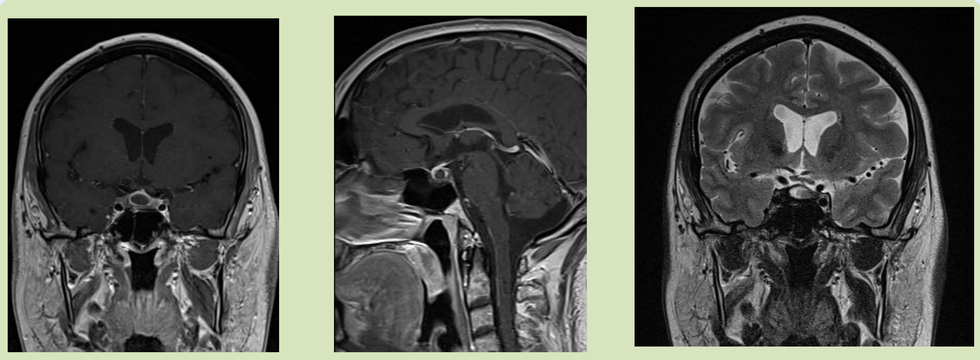
Introduction:

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.

Lab Results	At Presentation	After Treatment	Normal Values	Units
TSH	0.26	<0.02	0.35-4.5	mU/L
fT4	0.7	2.2	0.8-2	ng/dL
fT3	1.8	3.6	2-4.2	pg/mL
Cortisol	2.4	21.3	5,15-23,6	µg/dL
Testosterone	14	732	300-1000	ng/dL
LH	1.5	0.46	2-5.3	U/L
ESR	40	6	1-11	Mm
CRP	17.9	2	<5	mg/L



(a) (b) (c)

Fig. 1: Showing meningeal thickening and thickened, enhancing pituitary stalk together with cystic lesion.
(a) T1 coronal, (b) T1 Sagittal and (c) T2 Coronal.

Hypothesis:

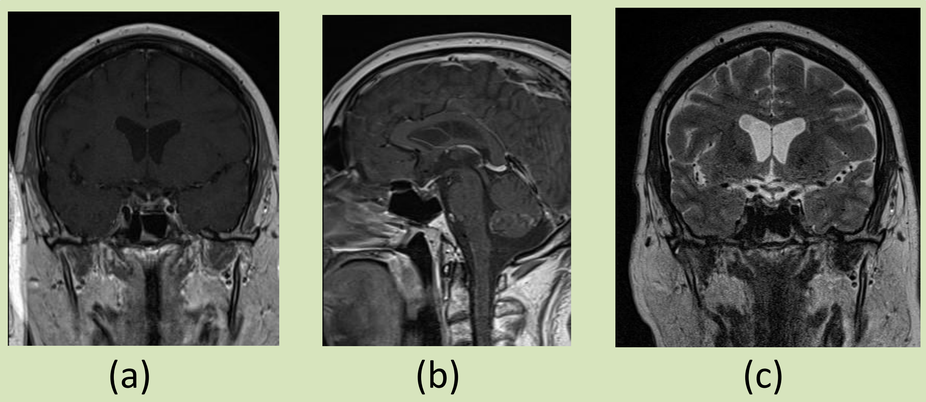
Because of the combination of acute and complete failure of the pituitary gland with intense, continuous headache, the ***hypothetical diagnosis of hypophysitis*** was made.
On the MR images, features of hypophysitis (meningeal thickening and thickened, enhancing pituitary stalk) were confirmed.

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-occured 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 dosis 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.



(a) (b) (c)

Fig. 2: After Treatment. Showing decreased meningeal thickening and disappearance of the cystic lesion.
(a) T1 coronal, (b) T1 Sagittal and (c) T2 Coronal.

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.

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