

# Pituitary apoplexy clinical features

Pituitary apoplexy is characterized by a sudden onset of [headache](#), [visual disturbance](#), altered [mental status](#), and [hormonal imbalance](#) due to acute hemorrhage or infarction of a pituitary gland.

[Diabetes insipidus](#) may occur with [pituitary apoplexy](#).

The clinical presentation varies widely and includes asymptomatic cases, classical pituitary apoplexy, and even [sudden death](#).

Because of the acute symptomatology, many patients are referred to a neurosurgical department without prior endocrinological assessment.

Neurologists and neurosurgeons need to be aware of the endocrinological sequelae of pituitary apoplexy in order to avoid potentially lethal complications. Patients should be counseled to adhere to long-term endocrinological and neurosurgical follow-up <sup>1)</sup>.

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An existing [pituitary neuroendocrine tumor](#) is usually present. The visual symptoms may include both [visual acuity](#) impairment and [visual field](#) impairment from the involvement of the [optic nerve](#) or [chiasm](#) and ocular motility dysfunction from involvement of the cranial nerves traversing the [cavernous sinus](#) <sup>2)</sup>.

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Paschou et al present a patient in his late 30s presented with sudden and severe frontal [headache](#), [fever](#), [blurred vision](#), [nausea](#), [confusion](#), as well as [oculomotor nerve palsy](#) (CN III) with partial [ptosis](#) of the left eyelid, dilated left pupil and left eye globe deviation inferiorly and laterally. The final diagnosis was acute pituitary apoplexy complicating a [pituitary macroadenoma](#). In this setting, headache is usually present due to stretching and irritation of the [dura mater](#), and fever due to meningeal irritation or upward expansion leading to hypothalamic dysfunction. Decreased visual acuity and defects in visual fields are caused by upward expansion, which compresses the [optic chiasm](#). [Ophthalmoplegia](#) can also be observed due to lateral expansion with invasion of the [cavernous sinus](#) <sup>3)</sup>.

<sup>1)</sup>

Grzywotz A, Kleist B, Möller LC, Hans VH, Göricker S, Sure U, Müller O, Kreitschmann-Andermahr I. Pituitary apoplexy - A single center retrospective study from the neurosurgical perspective and review of the literature. Clin Neurol Neurosurg. 2017 Oct 10;163:39-45. doi: 10.1016/j.clineuro.2017.10.006. [Epub ahead of print] PubMed PMID: 29055223.

<sup>2)</sup>

Nawar RN, AbdelMannan D, Selman WR, Arafah BM. Pituitary tumor apoplexy: a review. J Intensive Care Med. 2008 Mar-Apr. 23(2):75-90.

<sup>3)</sup>

Paschou SA, Tzioras K, Trianti V, Lyra S, Lioutas VA, Seretis A, Vryonidou A. Young adult patient with headache, fever and blurred vision. Hormones (Athens). 2016 Oct;15(4):548-550. doi: 10.14310/horm.2002.1701. PubMed PMID: 28222415.

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