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Pituitary apoplexy mimicking cranial giant cell arteritis: a rare case report

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Pituitary apoplexy (PA) is a rare condition caused by an acute or sub-acute hemorrhage or infarction of the pituitary gland, studies have shown that pituitary apoplexy occurs in 2-12% of patients with pituitary adenoma most often in a pituitary macro adenoma [1]
The clinical presentation of pituitary apoplexy could be acute or subacute, depending on the amount of hemorrhage and its incidence speed. Usually, headache is the most frequent and earliest symptom of PA [2]
The ocular manifestations are very described during this serious affection but when they are unilateral they may mislead into wrong diagnosis.

We report a case of a 61 years old female patient with history of poorly controlled arterial hypertension presented in the emergency department with acute onset of severe headaches, neck pain, unilateral severe vision loss of the left eye and diplopia. The presence of such symptoms in an old patient has raised our alarm bells and thus a complete physical examination was performed to search for other signs of giant cell arteritis (GCA), body temperature was measured at 37.8°C, no abnormalities in temporal arteries were found especially there were no thickening or reduced pulsation. The blood pressure was taken in four limbs showing no asymmetric measures, no pulse deficits was neither noticed.

Ophthalmologic examination of the left eye found visual acuity reduced to motion of fingers, the swinging-flashlight test showed a mild relative afferent pupillary defect, a mild deficiency of the adduction of the left eye, a little retraction of the lower eyelid was noted in comparison with the contralateral eye, which made us think of a possibility of a mild proptosis. No abnormalities were noticed in anterior segment and the intraocular pressure was within normal. The dilated fundoscopy was normal especially no optic disc oedema. Both of the right eye and neurological examination were unremarkable.
laboratory markers (platelets, erythrocyte sedimentation rate and/or C reactive protein) were returned negative.
The possibility of the unilateral proptosis in addition toacute-onset of diplopia and headache should prompt immediate neuro imaging. The orbito cerebral computed tomography (CT) has surprisingly showed pituitary hemorrhage. Cerebral magnetic resonance imaging MRI proved the diagnosis of PA.
the hypopituitarism features were confirmed by the presence of Thyrotropin (TSH) and gonadotropins luteizing hormone (LH) deficiencies, Follicle-stimulating hormone (FSH) was within the normal range.
The patient has undergone a surgical endonasal excision with great prognosis, a total ocular recovery was noted, the diplopia decreased and the visual acuity was increased to 9/10 at Snellen chart.
the histopathological and immunohistological analysis endorses the diagnosis of (FSH)-secreting pituitary adenoma.
post-operatively, automatic visual field test using the 24-2 SITA strategy showed unilateral left temporal visual defect. and Optical Coherence Tomography of the optic nerve head were performed revealing damage in nasal retinal nerve fiber.

the patient is continued to be seen in close and regular follow up in collaboration with the endocrinologist and the cardiologist in order to manage the hormone deficiency and hypertension.

Pituitary apoplexy is a clinical syndrome due to rapid expansion of the contents of the sella turcica, caused by hemorrhage or infarction into the pituitary gland. Visual abnormalities such as visual field deficits, impaired visual acuity or ocular palsies may arise due to compression of neuro-ophthalmic pathways in the pituitary fossa or extension into the cavernous sinus [3]

Pituitary apoplexy is frequently spontaneous, but predisposing factors can be identified in 10–40% of cases, hypertension seems to be the first potential predisposing factor, other risk factors like dopamine agonist use, anticoagulant use, head trauma or recent surgery can be found; our patient presents a long history of uncontrolled systemic hypertension that required combination therapy of angiotensin-converting enzyme inhibitors and a diuretic in order to get her blood pressure target.

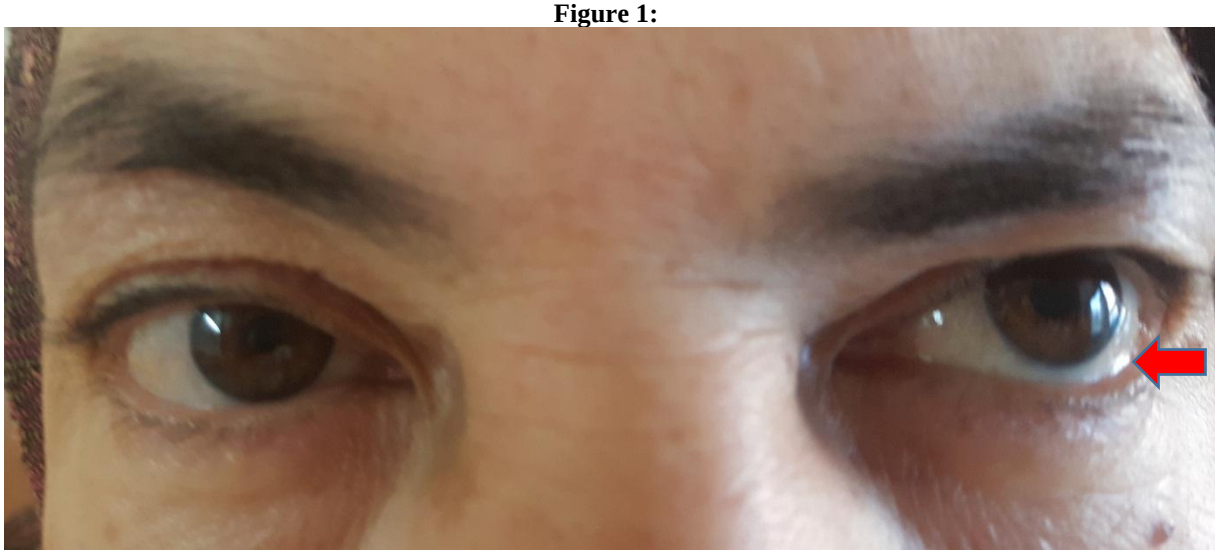
Clinical presentation was misleading in this case, the association of an abrupt onset of severe headache and unilateral visual loss in elderly individual are red flags for cranial GCA[4], thus a detailed examination was performed to detect systemic signs of this serious condition, , normal fundoscopy did not exclude the possibility of a Posterior ischemic optic neuropathy, but the negativity of other systemic signs and biological biomarkers was a bit reassuring, and urgent neuroimaging has completely restored the diagnosis.

early surgery is considered necessary in patients with consciousness state deterioration or in case of severe visual loss for optic chiasma compression. Surgical decompression normalizes visual acuity in about one-half of cases and improves it in 6–36% of cases Nevertheless, increasing evidences show that a more conservative management can ensure favourable neuro ophthalmological and endocrinological outcomes, at least in patients with moderate or spontaneous remission of visual impairment [5].

Endocrine and neuro ophthalmological prognosis of pituitary apoplexy inevitably depends on the appropriateness of the management during the acute and subacute phase of the disease. Indeed, patients with severe neurological or ophthalmological impairment can remarkably improve if correctly approached like in our case [5].

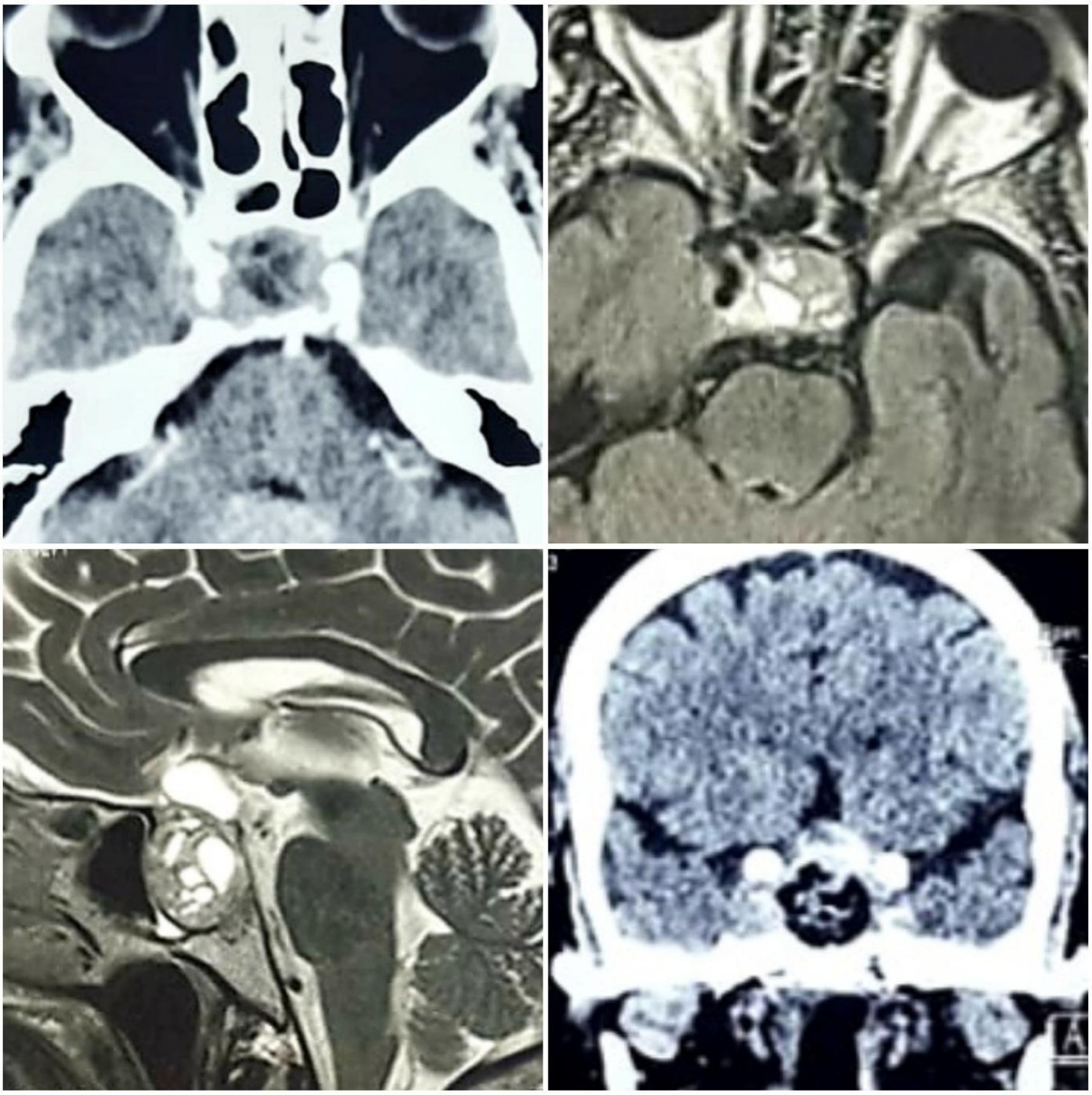
Pituitary apoplexy is a diagnostic and therapeutic challenge. It is manifesting in most of cases in acute headaches and visual loss. This clinical case is a reminder that similar presentation can mislead to other diagnosis such as GCA if we miss any small clinical detail.

Figure 1:



Front photo of both eyes showing mild exotropia of the left eye, a little retraction of the lower eyelid was noted in comparison with the right eye (arrow)

Figure 2:



(a): computed tomography appearance of pituitary apoplexy. Arrow on axial reconstruction indicate an intrasellar lesion, dis-homogeneously hyperdense, due to the presence of hemorrhagic components.
Large pituitary macroadenoma with MRI signs of acute hemorrhage. In this phase, hemorrhage appears hyperintense on both T1WI **(b)** and T2WI **(c).**
(d) Coronal reconstruction of cerebral computed tomography showing postoperative aspectof the lesion

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