Pituitary apoplexy case series

44 patients with Pituitary apoplexy. Their mean age was 50 ± 12.6 years. Among them, 31.8% had a known pituitary adenoma, and it was in all cases a macroadenoma, predominantly a prolactin-secreting tumor (42.8%). A triggering factor of PA was encountered in 31.8% of cases and it was mainly: head trauma, dopamine antagonists, and hypertension. The clinical presentation of PA encompassed headaches (84.1%), visual disturbances (75%), and neurological signs (40.9%). Gonadotropin deficiency was the most frequent form of hypopituitarism noted (59.1%), followed by corticotropin deficiency (52.3%), thyrotropin deficiency (47.7%), and somatotropin deficiency (2.3%). Hormonal assessment at PA onset concluded that 23 had a secreting adenoma: 18 prolactinomas, 3 ACTH-secreting adenomas, and 2 GH-secreting adenomas. In the 21 remaining cases, the tumor was non-functioning (47.7%). Pituitary MRI was performed in 42 cases (95.5%), revealing infraction and or hemorrhage in the pituitary gland in 33 cases; a heterogenous signal or a fluid level within the adenoma, in nine cases. Urgent administration of intra-venous hydrocortisone was required in 19 cases. Mannitol administration was mandatory in a patient who had severe intracranial hypertension. Surgical management of the PA was imperative in 24 patients (54.5%): 15 suffered from severe visual impairment, 4 had intracranial hypertension, 2 cases demonstrated an impaired consciousness, 2 patients experienced a tumor enlargement and one case had a severe Cushing's disease. Operative complications found were rhinorrhea attributable to cerebral spinal fluid leakage, diabetes insipidus associated with rhinorrhea, isolated diabetes insipidus and hydrocephalus in one case each. Long-term follow-up concluded that headaches persisted in five cases, owing to the tenacity of a macroprolactinoma regardless of cabergoline treatment in one case, the recurrence of an adenoma in two cases, and its persistence despite the medical and the surgical treatment in two patients. Concerning the visual acuity defects, only two patients had persistent diminished visual acuity at long-term follow-up. Among 25 patients, 13 were diagnosed with definitive thyrotropin deficiency. Similarly, 14 patients had persistent corticotropin deficiency (CD). Additionally, a CD was de novo diagnosed in two patients. Otherwise, gonadotropin deficiency prevailed in all cases. Persistent prolactin deficiency was seen in two patients. The disappearance of the pituitary tumor was encountered in 11 out of 24 cases at long-term follow-up. Overall, surgery was associated with better outcomes than conservative management. Pituitary apoplexy is a challenging condition due to its variable course, diagnosis difficulty, and management, as gaps remain to determine the best approach to treat this condition. Pituitary apoplexy is a challenging condition due to its variable course, its diagnosis difficulty, and management, as gaps remain to determine the best approach to treat this condition [1)]

Lammert et al., analysed data from 24 patients (m:f/16:8) with a median age of 64 yrs (38 to 83yrs) that underwent surgery for pituitary apoplexy regardless of time from symptom onset. Apoplexies were necrotic in 14 cases and haemorrhagic in 10 cases.

Preoperatively, 7 patients (29.2%) showed complete anterior pituitary insufficiency, 16 patients (66.6%) had partial anterior pituitary insufficiency and one patient (4.17%) had normal pituitary functions. Persistent panhypopituitarism was found in 7 patients (29.2%), whereas an overall improvement of pituitary function was noted in 13 (57.1%) patients. Preoperative prolactin (PRL) levels were significantly associated with recovery of endocrine functions, whereas specifically all patients with preoperative PRL levels of at least 8.8 ng/ml recovered partially or fully. Time to surgery (0-7 days vs. 1-4 weeks vs.>4 weeks) was not significantly associated with outcome.

The data emphasize that normal and high preoperative PRL levels are associated with better endocrine outcome after surgery. They conclude that patients benefit from surgical intervention even after delayed diagnosis with the serum PRL levels is being a valid biomarker for clinical decision making [2].

1)
Hadj Kacem F, Trimeche O, Gargouri I, Ben Salah D, Charfi N, Rekik N, Mnif F, Mnif M, Elleuch M, Abid M. Diagnosis and management of pituitary apoplexy: a Tunisian data. Chin Neurosurg J. 2023 Jul 1;9(1):17. doi: 10.1186/s41016-023-00331-6. PMID: 37391784.
2)
Lammert A, Walter MS, Giordano FA, Al Zhgloul M, Krämer BK, Nittka S, Schulte DM, Ratliff M, Hänggi D, Seiz-Rosenhagen M. Neuro-Endocrine Recovery After Pituitary Apoplexy: Prolactin as a Predictive Factor. Exp Clin Endocrinol Diabetes. 2018 Jul 2. doi: 10.1055/a-0640-2915. [Epub ahead of print] PubMed PMID: 29966153.