Pituitary Apoplexy Management

Pituitary apoplexy is a neuroendocrine emergency caused by acute hemorrhage or infarction of a pituitary adenoma, typically presenting with:

Sudden headache

Visual impairment (e.g., bitemporal hemianopsia)

Ophthalmoplegia

Altered consciousness

Hypopituitarism (including adrenal insufficiency)

 Initial Management (Emergency Phase) 1. Stabilization ABCs: Airway, Breathing, Circulation

ICU admission if altered consciousness

2. Immediate Medical Therapy High-dose corticosteroids (e.g., IV hydrocortisone 100 mg bolus, then 50–100 mg q6-8h)

Reduces edema

Prevents adrenal crisis

Intravenous fluids and electrolyte correction

3. Endocrine Workup Baseline labs: cortisol, TSH, fT4, LH/FSH, prolactin, IGF-1

Monitor sodium, glucose, osmolality

4. Neuroimaging Urgent MRI is gold standard

CT may show hyperdense lesion in acute hemorrhage

 Definitive Treatment Strategy A. Surgical Management Indications:

Rapid deterioration of visual acuity or field deficits

Progressive ophthalmoplegia

Reduced consciousness

Approach:

Transsphenoidal decompression (preferred)

Timing: within 24–72 hours for best visual outcomes

B. Conservative Management Indications:

Stable or improving vision

Mild/no cranial nerve deficits

No reduced consciousness

Close monitoring with:

Serial neurological and ophthalmologic exams

Repeat MRI in 1–2 weeks

 Follow-up and Long-term Care 1. Endocrine Replacement Lifelong hormone replacement if persistent hypopituitarism

Hydrocortisone, levothyroxine, sex steroids ± GH

2. Tumor Surveillance MRI at 3 months, then annually

3. Vision and QoL Monitoring Regular ophthalmologic evaluations

Neuropsychological and rehabilitation support

 Clinical Pearls Corticosteroids are first-line regardless of surgery.

Not all patients with apoplexy need surgery.

Early endocrinology and neurosurgery consult is essential.

Recovery of function is variable—vision may improve, but pituitary function often does not.