



Pituitary Apoplexy: Navigating the Ongoing Dilemma of Surgical vs. Conservative Management



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Abstract

Pituitary apoplexy has been considered as an surgical emergency since long. The predictive factors and outcome of conservative vs surgical management has been less discussed
We evaluated all patients reporting to ER with apoplexy. Noted all the predictive factors, clinical and radiological factors and attempted to define the indications of conservative or surgical management.
The authors found that prolactinomas were the most common functional tumours to bleed while no other co-morbidity had positive correlation with its occurrence
Patients with KNOSP1 and 2 , presenting with isolated ptosis and prolatinomas with apoplexy had the best outcome while enhancement pattern, percentage of cystic component, any other comorbidity didn't have any impact on its outcome

Introduction

Neurosurgical emergency
Definition: Hemorrhage or Ischemic infarction of pituitary adenoma or normal pituitary gland.
Pituitary adenomas are 5.4 times more likely to hemorrhage than other brain tumors.
Prolactinoma are amongst commonest functional tumours to bleed while ,70 % of pituitary adenomas which bleed are non-functional
Rapid tumour growth may outstrip arterial blood supply
The mass effect of a growing tumour may compress the pituitary stalk against diaphragm sella
Result: Ischemic or hemorrhagic infarction

Methods and Materials

A prospective observational study was sconducted in PGIMER on all patients with pituitary apoplexy . The predfictive factors and their outcome was assessed
From 2020 to 2023
Following parameters were recorded
Clinical presentation
CT brain with Sella and angiography at presentation
MRI Sella at the time of presentation-radiological feature

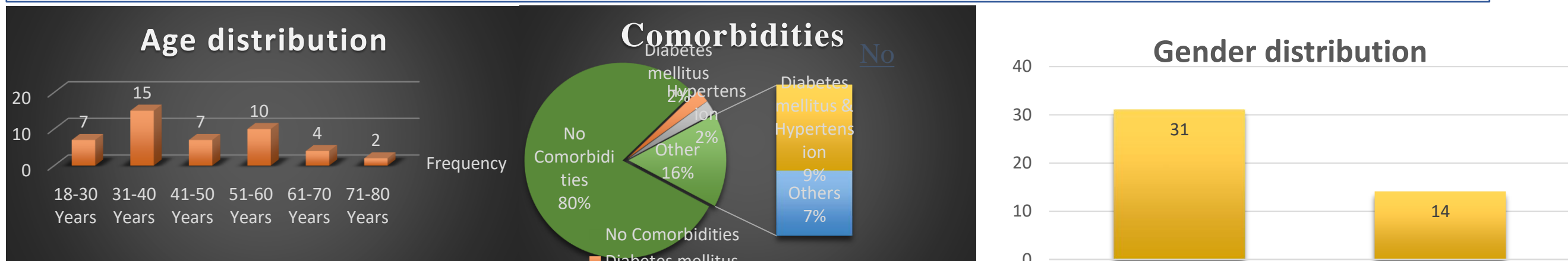
Methods and Materials

Following radiological parameters were noted
a) Size of the lesion
b) HARDY grading
c) KNOSP grading
d) Amount of bleed
e) Solid/ bleed/ cystic ratio
f) Evidence of chiasmal compression
g) Invasive or non- invasive

Following clinical parameters were noted
Visual field examination at presentation
Hormonal profile at presentation
Comorbidities and drugs
Follow up at 6 weeks, 12 weeks and 6 months

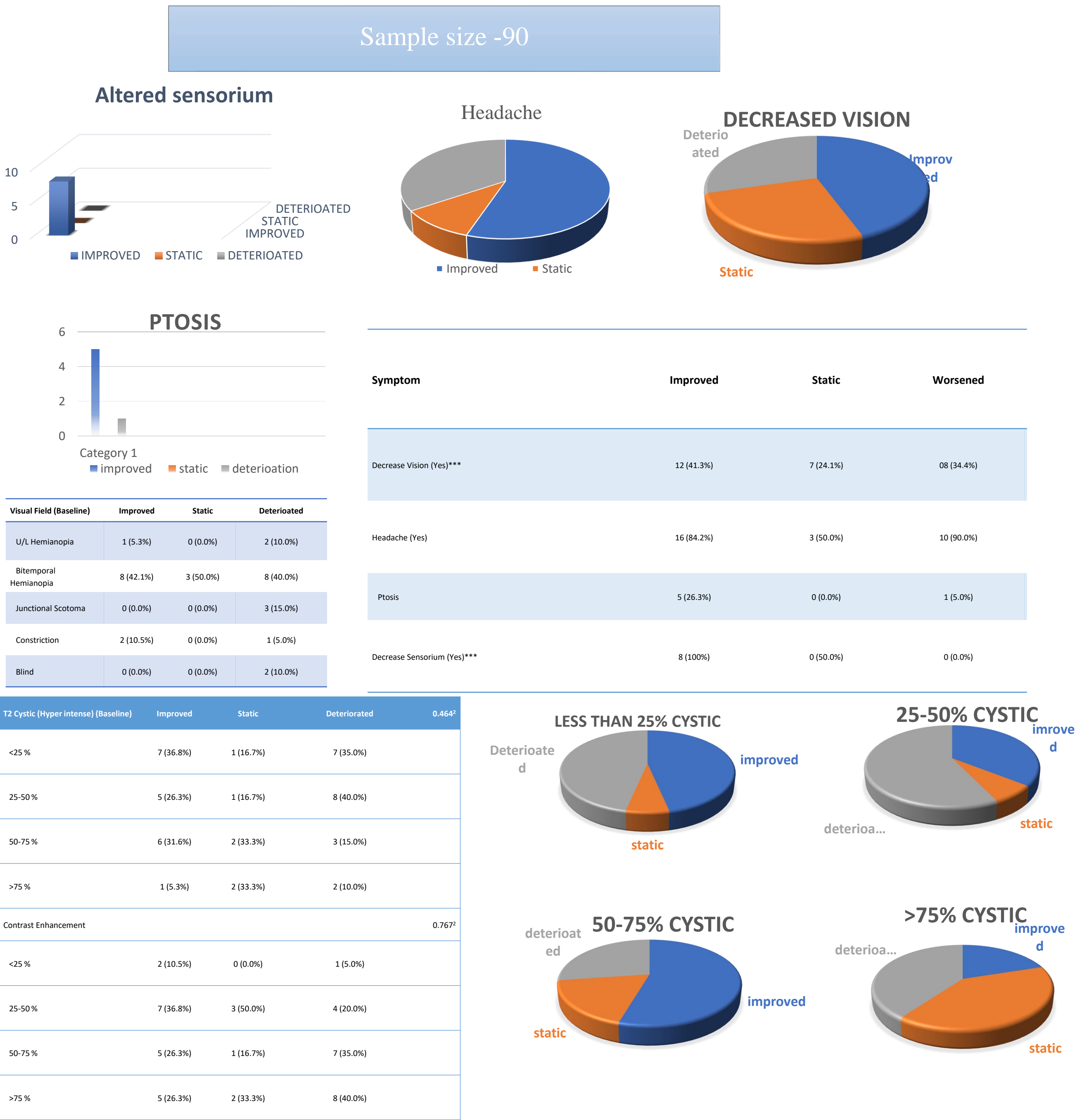
Results

Pre operative factors
Coagulopathy, bleeding diathesis- no correlation
Antiplatelet drugs, anticoagulants- no correlation
CT angiography- only 1 patient had an incidental aneurysm – Un ruptured (CTA not recommended)



Our indications of surgery

Deterioration of symptom-vision, sensorium, headache
Non improvement in severe vision loss, sensorium within 48 hour
Increase in size of lesion
Worsening after initial improvement



Discussion and Conclusion

No comorbid condition has a definitive increased incidence of Apoplexy
CT angiography- no role
Conservative trail can be offered to most initially
Patients with isolated ptosis have better prognosis.
Apoplexy in prolactinoma has best prognosis.
Patients with prolonged bilateral optic atrophy and severe visual deficits - usually have unfavorable visual improvement after surgery
Hardy II A/ KNOSP I and II group patients usually improve well .

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