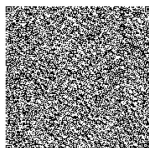


## INTRODUCTION:

- Empty sella often supports a diagnosis of raised intracranial pressure (ICP)
- It is also seen in normal individuals
- This study's objective is to determine the prevalence of empty and partially empty sella in neuro-ophthalmology patients undergoing MRI for indications other than papilledema or raised ICP

## METHODS:

- Consecutive patients without papilledema or suspected raised ICP who underwent brain MRI between August 2017 and May 2021 were included in the study
- Sagittal T1-weighted images were evaluated by two independent, blinded neuroradiologists who graded the sella using published criteria (categories 1-5, with 1 being normal and 5 showing no visible pituitary tissue)
- Gender, age, OCT RNFL and GCIPL thickness, BCVA, IOP, Humphrey mean deviation, BMI, afferent visual issues and efferent visual issues were collected



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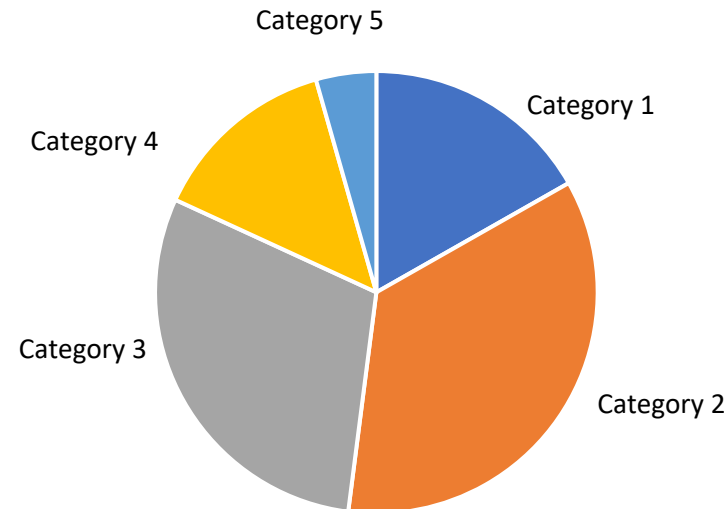


Figure 1: Proportion of patients in sella categories 1-5

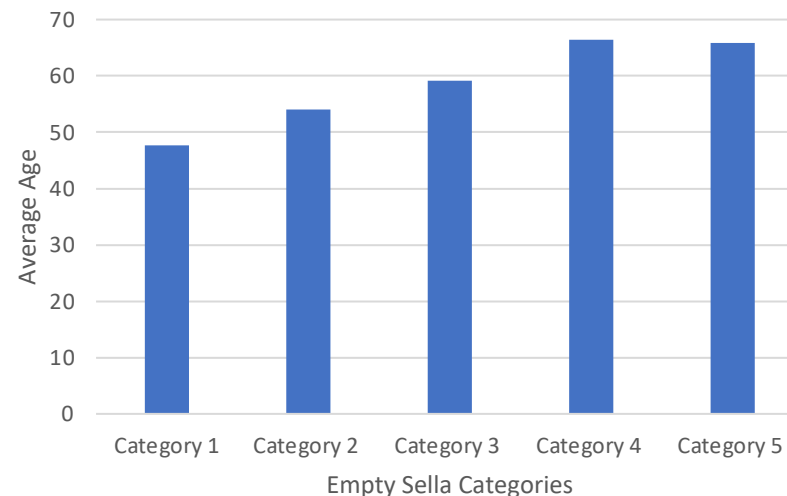


Figure 2: Mean age of female patients in sella categories 1-5

## RESULTS:

- 613 patients (309 men; average age  $56.69 \pm 18.06$  years) were included in the study
- 176 patients had moderate concavity of the pituitary gland (category 3), 81 had severe concavity (category 4) and 26 had no visible pituitary tissue (category 5) (Figure 1)
- There was a statistically significant difference in age between composite categories 1&2 (mean  $52.89 \pm 18.91$ ;  $P < 0.001$ ) and composite categories 4&5 (mean  $63.41 \pm 15.44$ ), but not the other clinical parameters
- Female patients in categories 2 to 5 were significantly older than female patients in category 1 (category 2:  $p < 0.023$ , categories 3-5:  $p < 0.001$ ) (Figure 2)

## CONCLUSIONS:

- Empty sella is common in neuro-ophthalmology patients without raised ICP; 17.4% of patients have severe concavity or no pituitary tissue visible
- An isolated finding of empty or partially empty sella on imaging is therefore of questionable clinical value in this patient population