

Prognostic implication of size on outcomes of Pituitary Macroadenoma: a comparative analysis of Giant Adenoma with Non-giant Macroadenoma

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Introduction

The authors aimed to differentiate giant pituitary adenomas from non-giant pituitary macroadenomas, distinguishing them based on the presenting complain, surgical procedures, tumor resections and recurrence.

Methods

A retrospective analysis of pituitary macroadenomas that underwent surgical resection at Aga Khan University, Pakistan was done. Tumors were divided into two groups for comparison, tumors greater than 4 cm were classified as giant pituitary adenoma while macroadenomas smaller than 4 cm were termed as non-giant pituitary macroadenoma. Between 2006 and 2017, 75 patients had resection of giant pituitary adenoma. To match these cases, 75 patients with non-giant macroadenoma were chosen using non-probability sampling

Results

The most common complaint of patients with non-giant pituitary macroadenoma were visual deterioration, reported by 77.3% of patients with non-giant pituitary macroadenoma and 89.3% with giant pituitary adenoma. The mean volume of the non-giant adenomas was 6.3ml (range 0.45ml-22ml) in contrast to giant pituitary adenomas with a mean volume of 30.1 ml (range 10.8 ml-149.4) (p=0.001). Microscopic transsphenoidal approach was the most commonly used procedure in both non-giant macroadenoma (49%) and GPA (44.8%). Tumor recurrence/progression was seen in 9.3% of patients with non-giant pituitary macroadenoma and 44% of patients with giant pituitary adenoma p=<0.001. The mean extent of resection was 88.9% for non-giant macroadenomas whereas the mean extent of resection was 76.7% for giant pituitary adenomas (p=0.03).

Conclusions

When compared with non-giant macroadenoma, giant pituitary adenomas are more likely to present with a higher number of preoperative symptoms, lesser chances of tumor resection and postoperative symptoms. They are also associated with higher number of recurrence.

Learning Objectives

Comparison of Giant Pituitary adenomas vs non-giant macroadenomas.

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