Body Weight Changes In Patients With Active Cushing’s Disease After Transsphenoidal Surgery

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INTRODUCTION

• Cushing’s disease (CD) is usually associated with alterations in body mass index. Successful pituitary surgery can result in long term remission with sustained weight loss.

• We examined rates of body weight change (in the post-operative period within 6 months) in patients with active CD who underwent transsphenoidal surgery (TSS) and the relationship of weight loss to remission status.

METHODS

• Clinical data was obtained from a CD database in addition to an online patient medical record (EPIC).

• All patients with biochemically confirmed active CD underwent their first TSS by a single neurosurgeon at the Cleveland Clinic: (October 2004 to August 2013).

• None of the patients received glucocorticoids during surgery.

• Initial remission was defined by nadir cortisol <5 µg/dl and/or ACTH <5 pg/ml within the immediate post-operative period (72 hrs).

• Long term remission (≥ 12 months) was defined as 24 hr UFC < ULN (upper limit of normal), and/or sequential midnight salivary cortisol <ULN, and 1mg DST; 8am cortisol <1.8 µg/dl.

• Statistical analyses were performed using SAS software (Version 9.2; Cary, NC).

RESULTS

• Data was available for 88 patients (F:63,M:25), mean age at presentation was 47 years (range 24-87 years), median follow up 52 months (12-118 months).

• No significant differences in baseline demographics including pituitary adenoma size (p=0.25) and BMI (p=0.21) were observed between the two groups.

• 64 had pituitary microadenoma (or no visible tumour), 24 were macroadenoma.

• 74 (84%) patients had initial remission after surgery, during follow up 6 of those with initial remission had recurrence of CS.

DISCUSSION

• The current study demonstrates that the majority of patients with initial remission after TSS will experience weight loss. Patients with initial non-remission although to a lesser degree can also experience initial weight loss after TSS. The study also confirms that those with initial remission had greater weight loss at 3 and 6 months relative to those without initial remission. Weight changes within the first six months was also predictive of long term remission status.

CONCLUSION

• After TSS for CD, weight loss within the first six months maybe an additional clinical indicator associated with early biochemical and current remission status.