

Endocrinologia

EVALUATION OF CUSHING'S DISEASE REMISSION BASED ON SERUM CORTISOL DYNAMIC EARLY AFTER TRANSPHENOIDAL SURGERY

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Context: Cushing's disease (CD) remission and recurrence predictors are matter of debate. Objective: to evaluate the serum cortisol dynamic after transsphenoidal pituitary surgery (TSS) in predicting remission and recurrence of CD. Design and patients: a cohort of 103 CD patients from a referral center was prospectively analyzed at 111 TSS in 6.0 ± 4.8 years of follow-up. Intervention: twenty patients (20 surgeries) received routine glucocorticoids in transoperative and had serum cortisol measured at 10-12 days after TSS (Protocol I). Eighty-six patients (91 surgeries) had serum cortisol measured at each 6h in the first 24h, at 48h and 10-12 days after TSS and glucocorticoid administration only if adrenal insufficiency (Protocol II). Main outcomes: remission (defined as clinical hypercortisolism absence plus serum cortisol $< 3 \mu\text{g/dl}$ (82.8 nmol/liter) in overnight dexamethasone test and/or normal free urinary cortisol) during follow-up and recurrence (loss of remission criteria at least a year after TSS). Results: we observed 80% of remission after first TSS, and 8% of the patients had recurrence Serum cortisol nadir $\leq 3.5 \mu\text{g/dl}$ (96.6 nmol/liter) at 48h after TSS had specificity of 100% and sensitivity of 73%, and serum cortisol nadir $\leq 5.7 \mu\text{g/dl}$ (157.3 nmol/liter) at 10-12 days after surgery had specificity of 100% and sensitivity of 92% in predicting surgery remission. Conclusion: at the time of the hospital discharge the cortisol nadir at 48h PO could properly predicting surgery remission. Recurrence could not be predicted. These results state the importance of serum cortisol values after TSS in predicting CD remission.