47336 IS CUSHING'S DISEASE REMISSION ASSOCIATED WITH DIABETES MELLITUS REGRESSION?

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Introduction: Diabetes mellitus (DM) is a frequent comorbidity in Cushing' syndrome (CS). Glucocorticoid (GC) excess causes pancreatic B-cell dysfunction and insulin resistance, which correlates with hypercortisolism (HC) level. However, remains unclear if the Cushing's disease (CD) remission results in DM resolution. **Objectives:** To asses DM prevalence in CD patients and DM resolution after 1-year remission of CD. **Methods:** retrospective cohort of 108 patients diagnosed with CD between 1987 and 2014 at a tertiary endocrinology service. Patients underwent clinical and metabolic evaluation at diagnosis and after CD treatment. CD remission criteria after transsphenoidal surgery (TSS) were: cortisol < 3 mcg/dl on the 1 mg-overnight test, normal urinary free cortisol (UFC) and/or adrenal insufficiency with GC dependence for 6 months. DM resolution criteria were glycated hemoglobin (A1c) < 6.5% and fasting glucose < 126 mg/dl without antidiabetic drugs. For analysis of DM remission, we included the CD patients submitted to TSS with available DM status after 1 year of surgery. **Results:** Of the 108 CD patients, 40 (37%) also had DM (CD+DM) at baseline evaluation and 32% of them were treated with hypoglycemic agents and/or insulin. The majority was female (82.5%), mean age 39 (± 8.5) years, BMI 31.26 (±5.7) kg/m^2 and mean A1c 8.4 (±3.3) %. All diabetic patients had diagnosis of hypertension and more than 95% have dyslipidemia. All DM+CD patients were submitted to TSS and anatomopathological diagnosis of ACTH-secreting adenoma was confirmed in 80%. After 1 year of TSS, CD remission was achieved in 33 (82,5%) of the previously DM+CD patients and 37% were also considered cured of DM. However, DM resolution was not more frequent between patients who reached remission of CD (p = 0.378). There was no statistically significant association between age, gender, body mass index, lipid profile, 24h-UFC at diagnosis and resolution of diabetes. Glucorticoid use as a factor associated with DM persistence cannot be accessed in this cohort because of low frequency of suprarenal insufficiency following TSS in CD+DM patients. **Conclusion:** Prevalence of DM (37%) in this representative sample of CD patients is according to literature data (20%-50%). Short term remission of CD does not seem to predict resolution of DM, perhaps because metabolic derangement of HC persists even after its correction and factors associated with DM cure are heterogeneous.

47328 MIDNIGHT SALIVARY CORTISOL INCREASE WITH AGE

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Introduction: Late-night salivary cortisol (LNSC) is a simple, non-invasive and cheap test, recommended for the screening of Cushing syndrome – elevated cortisol levels suggest the presence of the syndrome. However, the salivary cortisol levels can be influenced by the laboratorial method and perhaps by clinical characteristics, such as age and body mass index (BMI). **Objective:** To establish a cutoff for LNSC in the healthy population in order to exclude hypercortisolism and to evaluate the possible influence of gender, age and BMI. **Methods:** Cross-sectional study including 110 non-smoking healthy adults, with no use of drugs, except for oral contraceptives and thyroid hormone. Samples of saliva were collected at midnight and kept refrigerated. Salivary cortisol was measured by electrochemiluminescence (Roche Diagnosis GmbH, Mannheim, Alemanha). This study was approved by Ethics Committee of Hospital de Clínicas de Porto Alegre (number 140073). **Results:** 110 healthy adults were evaluated, 39% were man, age was 34 ± 13 years (18-65 years), BMI was 24 ± 4 kg/m^2; blood pressure (BP), 115 ± 11 x 74 ± 9 mmHg and fasting glucose, 86 ± 11 mg/dl. LNSC did not present Gaussian distribution; median was (0.02-0.31) µg/dL. 25% of the group (P25) were in value 0.07 µg/dL, P50 up to 0.11 µg/dL and P75 up to 0.18 µg/dL. Thus, we set the reference cutoff in healthy subjects: P97.5 = 0.292 µg/dL. The correlation between salivary cortisol and age was significant, r=0.35, P<0.001, but not between cortisol and BMI, r = 0.11, P = 0.254. Multiple linear regression disclosed a significant positive association between salivary cortisol and age, r^2 = 0.20, P < 0.001, but no association with gender (P = 0.326) was found. To compare the influence of age, we analyzed decades: up to 29 years (N = 51), 30-39 years (N = 17), 40-49 years (N = 12) and 50 years or more (N = 19). Non-parametric tests showed statistically significant higher salivary cortisol in participants ≥ 50 years compared to those < 50 years (P < 0.001). **Conclusion:** Older subjects present higher LNSC levels, with no influence of gender or BMI. The cutoff determined was 0.3 µg/dL to define maximum normal limit of salivary cortisol at midnight.