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Neuro - Series A

BEHAVIOURAL CORRELATES OF DEHIDROEPIANDROSTERONE-SULPHATE (DHEAS)

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Background of Study: DHEAS is the most abundant hormone in the peripheral circulation. Since it is lipid soluble, central effects may be expected. In this report we explored personal-ity correlates of DHEAS.

Methods: We studied 120 consecutive patients assisted at the outpatient Endocrine department of a public central hospital. Psychometric evaluation included the Minnesota Multiphasic Personality Inventory (MMPI), Type A personality; Life Events Form (LEF), and the Edinburgh Inventory of Manual Preference (EIMP). Baseline endocrine measurements included ACTH, cortisol, DHEAS and Prolactin (PRL). Statistical analysis used the SPSS.

Results: Baseline DHEAS levels presented a normal distribution - Kolmogorov-Smirnov test, $z=0.925$, $p<0.5$. Higher values were found in male gender, $p<0.05$, and an inverse relation was found with age, $p<0.05$. After correction for gender and age, no significant differences were found across diagnostic groups. DHEAS was inversely related to the Neurotic triad (Hypochondria+Depression+Hysteria) - $r=-0.368$, $p<0,0001$ - but not with either the psychotic *dyad* or the behaviour deviant triad. DHEAS was not different in right- or left-handed subjects, nor in those with higher or lower LEF or type A personality scores.

Conclusions: We showed that DHEAS is significantly related to the personality profile. Since decreased DHEAS levels are inversely related to health status and life expectancy and personality dimensions are stable and established in early childhood, these results suggest that DHEAS may reflect the increased morbidity and mortality of neurotic subjects.



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Obesity - Series A

PLASMA CORTICOTROPIN RELEASING HORMONE (CRH) AND (1-ENDORPHIN IN RELATION TO BODY FAT AND EATING BEHAVIOUR*Martin Martins J.¹, do Vale S.¹, Carrilho B.¹, Saldanha C.¹, Martins e Silva J.¹*¹Lisbon Medical School, Biochemistry Institute, Lisbon

Background of Study: Neuropeptides acting at the hypothalamic nuclei modulate eating behaviour and energy balance. There is some previous evidence that peripheral levels of neuropeptides may reflect central production. In this report we measured peripheral levels of CRH and (b-endorphin and related them to body fat and eating behaviour.

Methods: We studied 25 consecutive obese subjects and 25 controls. Anthropometric measurements were obtained and eating behaviour was evaluated with the Interview for the Diagnosis of Eating Disorders (IDED). CRH and (3-endorphin were measured in duplicate with Enzyme immunoassay. Statistical analysis used the SPSS program.

Results: Plasma CRH and O-endorphin baseline values - 483 ± 331 pg/mL and 5403 ± 5597 pg/mL, respectively - were normally distributed and not significantly related to each other. Obese subjects presented non significantly lower CRH and higher (1-endorphin levels. The (3-endorphin/CRH ratio (EC) was significantly higher in obese subjects - 16.5 ± 2.8 vs. 9.3 ± 1.9 , $p < 0.05$. The EC ratio was directly related to the Body Mass Index and to the Abdominal-Thigh ratio, $p < 0.05$. Plasma CRH levels were inversely related to weight at age 20 years, while plasma (3-endorphin levels were directly related to the bulimic index, $p < 0.05$.

Conclusions: We conclude that: plasma levels of neuropeptides may be used as an index of central production; altered neuropeptide levels are found in obesity and relate to eating behaviour; CRH levels relate to satiety while (i-endorphin levels suggest increased hunger feelings. These results may be useful to further explore the pathogenesis of obesity.