SAT-030

The Aging Males' Symptoms (AMS) scale is used to assess health-related quality of life (HRQOL) and erectile dysfunction (ED) in hypogonadal men. However, this questionnaire hasn't been validated specifically for use in hypogonadal men with T2D. BDHQ was developed using data collected in the Barnsley Type 2 Diabetes Cohort Longitudinal Study based on AMS, The International Index of Erectile Function Questionnaire, and The Short Form (36) Health Questionnaire. Statistical analysis identified the 19 most sensitive and specific questions for identifying men with hypogonadism in a T2D population.

Objectives: To assess the significance of AMS and BDHQ in hypogonadal men with T2D.

Methods: The research data from a study involving men with T2D was used. All men were divided into 2 groups according to their baseline total testosterone (TT) status: group 1 (n = 82) - men with low TT (<10.4nmol/l; 300ng/dl), and group 2 (n = 64) - men with normal TT (≥10.4nmol/l; 300ng/dl). Data was also assessed using calculated freeT and bioavailableT. The statistical analysis was carried out using SPSS software and the data analysed using General Linear Model Univariate analysis of variance and Receiver Operating Characteristic (ROC) curve.

Results: Mean age for group 1 was 59.4 ± 10.1 years (range 25 - 77) and for group 2 was 61.5 ± 9.8 years (range 30 - 80). Mean TT for group 1 was 7.9 ± 1.8 nmol/l (range 1.3 - 10.3); for group 2TT was 14.9 ± 4.1 nmol/l (range 10.4 - 29.5). There was statistically significant difference in the scores in both questionnaires between the groups (AMS, p=0.012; BDHQ, p=0.035). Area under the curve (AUC) by ROC analysis showed no significant difference in sensitivity and specificity between the two questionnaires (AMS, AUC=0.623; BDHQ, AUC=0.606). To achieve sensitivity of 80%, it showed that the cut-off for positive test should be 40 out of 85 for AMS, and 44 out of 95 for BDHQ.

Conclusion: The BDHQ can be used to support a diagnosis of hypogonadism in the presence of persistent testosterone deficncy when TT is <10.4nmol/l. Whilst AMS is well-recognised tool for assessing HRQOL and ED in hypogonadal men in general population, the cut-off for positive test should be lower in diabetic population. In addition, this study showed that BDHQ is not inferior test to AMS in assessing HRQOL and ED in hypogonadal men with T2D.

Bone and Mineral Metabolism

BONE DISEASE FROM BENCH TO BEDSIDE

The Effects of Acute Hyponatremia on Bone Remodeling Markers in Patients with Subarachnoid Hemorrhage

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SUN-352

Animal data and cross-sectional human studies have established that chronic hyponatremia predisposes to osteoporosis; the effects of acute hyponatremia on bone remodeling are unknown. Serum markers of bone remodeling (total procollagen type 1 amino-terminal propeptide (P1NP), bone specific alkaline phosphatase (bone ALP), N-mid-osteocalcin (OCI) and C-terminal teleopeptides of type I collagen (CTX-1)) were assessed in a cohort of patients admitted with subarachnoid hemorrhage (SAH), who were prospectively studied over seven days. The ratio of P1NP:CTX-1 was calculated to report a bone formation index.

Twenty-two patients (13 women), median (IQR) age 53 (47, 62) years were recruited. Patients who developed post-SAH ACTH deficiency and those treated with glucocorticoids, or continuous enteral feeding were excluded. All patients were eunatremic on initial assessment. Eight patients developed acute hyponatremia, median nadir plasma sodium concentration (pNa) 131 (128, 132) mmol/L, and 14 remained eunatremic, nadir pNa 136 (133, 137) mmol/L. The groups were matched for age, 25-hydroxy Vitamin D, PTH, WFSS and Fischer scores. Serum cortisol concentration was greater in the hyponatremic group, 571 (504, 671) nmol/L, than the eunatremic group, 449 (400, 501) nmol/L, p=0.008. Bone remodeling markers and bone formation index (P1NP:CTX-1 ratio) were similar in the two groups at baseline.

There was a significant rise in CTX-1 in both hyponatremic patients, +0.15 (0.09, 0.37) µg/l, p = 0.009, and patients who remained eunatremic, +0.11 (-0.02, 0.23) µg/l, p = 0.04, with no significant difference between the groups. There was, however, a significant fall in P1NP:CTX-1 ratio in patients with acute hyponatremia, p = 0.02, but no significant change in eunatraemic patients, with significant between group difference, p = 0.02.

Changes in P1NP and OCI correlated positively with nadir pNa; r = 0.43, p = 0.04 and r = 0.61, p = 0.001 respectively. In addition, there was a positive correlation between change in P1NP:CTX-1 ratio and nadir pNa, r = 0.43, p = 0.04. There was no correlation between change in OCI or CTX-1 and nadir pNa. Serum cortisol was strongly negatively correlated with change in P1NP (r = -0.64, p = 0.001) but not with change in other bone remodeling markers.

Acute hyponatremia following SAH is associated with a fall in bone formation index; physiological hypercortisolemia may contribute to this. Further analysis with larger numbers will help us determine whether hyponatremia is an independent risk factor.

Neuroendocrinology and Pituitary

CASE REPORTS IN SECRETORY PITUITARY PATHOLOGIES, THEIR TREATMENTS AND OUTCOMES

Desmopressin Stimulation Test in a Pregnant Patient with Cushing's Syndrome

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SAT-254

Background: Cushing's syndrome (CS) in pregnancy is a rare condition. Accurate diagnosis and appropriate treatment