immobilization. She was readmitted 2 months later with septic shock and bilateral septic arthritis needing right hip replacement for source control. She developed multiple contractures of lower extremities due to prolonged immobility and was immobile for a total of 11 months despite significant physical therapy (PT) involvement. A few months into her hospital stay, she developed acute onset right ankle pain with no falls or trauma. Xrays showed right tibial metaphyseal fracture and severe demineralization of bones of lower extremities. History and physical exam showed no signs/symptoms of malabsorption, hyperthyroidism or Cushing's syndrome. Laboratory evaluation showed calcium (Ca) of 11.8 mg/dL (8.5–10.4), parathyroid hormone (PTH) < 3 ng/dL (12–72), C-telopeptide (Ctx) 1806 pg/ml (60–650) and normal phosphate, TSH, prolactin, 25-hydroxy and 1,25-dihydroxy vitamin D levels. PTHrP (parathyroid hormone related peptide) was < 2 pmol/L. 24-hour urine Ca was 414 mg (50–150). Serum and urine protein electrophoresis showed no monoclonal spike. Gonadal profile showed estrogen 42 pg/dL, FSH 1 mU /mL, LSH 0.1 mU /mL. DEXA scan showed severe osteoporosis with T-score of -3.2 at both the left femoral neck and lumbar spine. Osteoporosis and hypercalcemia were attributed to protracted immobilization. Therapy was initiated with alendronate 70 mg weekly along with vitamin D. Teriparatide was not used due to high serum Ca. Repeat labs at 6 months showed good response to alendronate with Ca 9.6, PTH 58, 24 hr urine Ca 96 and Ctx 1092. Mobilization of patient and regular PT were performed.

Conclusion:
Osteoporosis in a young adult is a rare entity and demands evaluation for secondary causes. An important and overlooked cause of bone loss is immobility and decreased load development on bones. Bone is a piezoelectric material and immobilization causes negative bone turnover. Early physical mobility and weight bearing is the most effective method of reducing bone loss. Teriparatide, due to anabolic effects has an advantage over bisphosphonates. Romosozumab (anti-sclerostin antibody) and whole body vibration are also being studied for disuse osteoporosis. Calcium and vitamin D supplementation are essential.

Adrenal
ADRENAL - HYPERTENSION

Seated Saline Suppression Testing Is Comparable to Captopril Challenge Test for the Diagnosis of Primary Aldosteronism: A Prospective Study

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MON-221

Abstract:
Objective: Saline suppression testing (SST) and captopril challenge test (CCT) are commonly used confirmatory tests for primary aldosteronism (PA). Seated SST (SSST) is reported to be superior to recumbent SST (RSST). Whether SSST is better than CCT remains unclear. Therefore we conducted a prospective study to compare the diagnostic accuracy of SSST and CCT.
Methods: Hypertensive patients with high risk of PA were consecutively included. Patients with aldosterone-renin ratio≥1.0 ng·dl-1/μIU·ml-1 were asked to complete SSST, CCT and fludrocortisone suppression test (FST). Using FST as the reference standard (plasma aldosterone concentration [PAC] post-FST ≥6.0 ng·dl-1), area under the receiver-operator characteristic curves (AUC), sensitivity and specificity of SSST and CCT were calculated, and multiple regression analyses were conducted to identify potential factors for false diagnosis.
Results: A total of 183 patients diagnosed as PA and 48 as essential hypertension completed the study. Using PAC post-SSST and PAC post-CCT to confirm PA, SSST and CCT had comparable AUCs (AUCSSST 0.83 [0.78,0.88] vs. AUCCCT 0.86 [0.81,0.90], P=0.308). Setting PAC post-SSST and post-CCT at 8.5 ng·dl-1 and 11 ng·dl-1, respectively, the sensitivity and specificity of SSST [0.71 (95%CI 0.64 to 0.77) and 0.82(0.68,0.90)] and CCT [0.73(0.66,0.79) and 0.80(0.66,0.89)] were not significantly different. In the multiple regression analyses, 1SD increment of sodium intake resulted in 40% lower risk of false diagnosis in SSST.
Conclusions: SSST and CCT have comparable diagnostic accuracy. Insufficient sodium intake decreases the diagnostic efficiency of SSST but not CCT. Since the CCT is simpler and cheaper, it is preferable to the SSST.

Diabetes Mellitus and Glucose Metabolism
CLINICAL STUDIES IN OBESITY, DIABETES RISK, AND CARDIOVASCULAR OUTCOMES

Features of the Severity of Cardiovascular Remodeling and Metabolic Disorders in Hypertensive Patients with Obesity in the Presence of Two Unfavorable Genotypes of the ADIPOQ and IRS-1 Genes

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SAT-612

The results of a number of studies have shown that in arterial hypertension (AH), G/T and T/T genotypes of the adiponectin gene (ADIPOQ) and Gly/Arg and Arg/Arg genotypes of the insulin receptor substrate 1 gene (IRS-1) are associated with a greater severity of metabolic disorders and hemodynamic parameters compared with G/G and Gly/Gly genotypes of these genes.
The aim of the study: to evaluate the severity of cardiovascular remodeling and metabolic disorders in hypertensive obese patients in the simultaneous presence of two unfavorable genotypes of the ADIPOQ and IRS-1 genes.
Methods: We examined 300 AH patients: 200 patients with AH and obesity, 50 patients with AH and normal body weight, 50 patients with AH and overweight, 40 patients with AH, obesity and type 2 diabetes mellitus (DM2), 30

healthy individuals. The polymorphisms of the ADIPOQ and IRS-1 was assessed by molecular genetic method.

Results: It was found that in all groups of hypertensive patients, regardless of body weight and the presence of DM2, the simultaneous presence of two unfavorable genotypes of the ADIPOQ and IRS-1 genes occurred significantly more often than in healthy individuals: in 41% of AH patients with obesity, 30% of AH patients with normal weight, 40% of AH with overweight, 57.5% of AH with obesity and DM2 vs. 13.3% of healthy individuals. In hypertensive patients, in the presence of overweight and obesity, the frequency of combination of the two unfavorable genotypes of these genes was significantly higher than in AH patients with normal body weight.

Conducting comparative evaluation of AH patients with obesity depending on the presence of two unfavorable genotypes or two protective genotypes of the ADIPOQ and IRS-1 genes showed that carriers of the combination of the G/T + T/T genotype of the ADIPOQ and the Gly/Arg + Arg/Arg genotype of the IRS-1 had a higher body mass index, more pronounced insulin resistance, cardiovascular remodeling, adipokine imbalance, impaired carbohydrate and lipid metabolism.

Conclusions: In AH patients, the frequency of the simultaneous presence of two unfavorable polymorphisms of ADIPOQ and IRS-1 genes was higher than in healthy individuals. In AH patients with overweight and obesity, the frequency of combination of the two unfavorable genotypes of the ADIPOQ and IRS-1 genes was significantly higher than in normal body weight. The presence of a combination of two unfavorable genotypes of the ADIPOQ and IRS-1 genes in patients with AH and obesity was associated with a greater severity of cardiovascular remodeling and metabolic disorders compared with the combination of two protective genotypes of these genes.

Diabetes Mellitus and Glucose Metabolism
DIABETES TECHNOLOGY AND ADVANCES IN CLINICAL TRIALS

Assessment of Dulaglutide Safety in Older Patient Populations in Rewind

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OR30-06

Background: Dulaglutide (DU) was superior to placebo (PL) in reducing the incidence of Major Adverse Cardiovascular Events in the Researching Cardiovascular Events with a Weekly INcretin in Diabetes (REWIND Study) broad patient population. The safety of DU treatment is also of interest to health care providers who treat an older patient population (≥65 years of age).

Aims: The primary objective of this post-hoc analysis was to evaluate DU safety in the REWIND patient subgroup populations categorized by age (≥ 65 and < 65 years) with regards to the occurrence of the composite safety outcome of overall mortality and severe hypoglycemia. One of the key secondary objectives was first occurrence of severe hypoglycemia.

Methods: Patients were grouped into two age groups: ≥65 and <65 years. Time-to-event for the composite safety endpoint as well as individual variables were analyzed using Cox proportional hazards regression. Hazard ratios (HRs) and 95% confidence intervals (CIs) for between group treatment differences were also calculated.

Results: Of the 9,901 patients randomized in REWIND, a total of 5,256 (DU, 2,619; PL, 2,637) were aged ≥65 years. The incidence of the composite safety outcome for patients aged ≥65 years was 399 of 2619 (15.2%) for DU-treated patients and 425 of 2,637 (16.1%) for PL-treated patients. The incidence of the composite safety outcome for those aged <65 years was 188 of 2,330 (8.1%) for DU-treated patients and 224 of 2,315 (9.7%) for PL-treated patients. Between group treatment differences (HR [95% CI]) were 0.94 (0.82, 1.08) for patients ≥65 years of age and 0.82 (0.68, 1.00) for patients <65 years of age; interaction p-value = 0.277. The incidence of the secondary outcome of first occurrence of severe hypoglycemia for patients aged ≥65 years was 46 of 2619 (1.8%) for DU-treated patients and 49 of 2,637 (1.9%) for PL-treated patients. The incidence of this outcome for patients <65 years was 18 of 2,330 (0.8%) for DU-treated patients and 25 of 2,315 (1.1%) for PL-treated patients. Between group treatment differences (HR [95% CI]) were 0.95 (0.63, 1.42) for patients ≥65 years of age and 0.71 (0.39, 1.31) for patients <65 years of age; interaction p-value = 0.443. The safety profile of DU was reviewed based upon the results of subgroup analysis of treatment emergent adverse events and serious adverse events by preferred terms for comparing PL and DU for age subgroups (≥65 years of age versus <65 years). None of the results indicated that DU has a different safety profile across the age subgroups evaluated in this post-hoc analysis.

Conclusions: Treatment with DU demonstrated similar safety in REWIND patients aged ≥65 years and those aged <65 years. Dulaglutide can be considered a safe and effective treatment option for use in older adults.

Healthcare Delivery and Education
EXPANDING CLINICAL CONSIDERATIONS FOR PATIENT TESTING AND CARE

Mortality and Glycemic Control Among Patients with Leukemia and Diabetes Mellitus: A Case-Control Study

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