RFA. And apart from size reduction, little is known about their ultrasonography (US) appearances after RFA. The purpose of this study was to 1) assess the effectiveness of single session RFA treatment on volume reduction 2) determine if quantitative US characteristics are correlated to the VRR 3) demonstrate the US characteristics from the baseline and during the follow-up. Quantification of characteristics was performed using commercial software. The CAD software classified nodules into the 2015 ATA sonographic patterns and TIRADS categories. All patients underwent a single treatment session and with significant improvement in cosmetic and pressure symptoms. It shows that there is a direct correlation between the initial tumor size/cyst component percentage and VRR. The US characteristics are significant different after RFA, and the tumors were categorized to more suspicious ATA patterns and had higher TIRAD scores. In conclusion, RFA is effective on volume reduction and US characteristics correlated with therapeutic success. Post RFA US features may potentially mislead and clinicians should always keep in mind.

Cardiovascular Endocrinology

ENDOCRINE HYPERTENSION AND ALDOSTERONE EXCESS

Patients with Hyperaldosteronism Have Higher Prevalence of Obstructive Sleep Apnea. From the National Inpatient Sample.

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Introduction: Previous studies suggested that aldosterone excess may worsen obstructive sleep apnea (OSA) through causing peri-pharyngeal edema. **Objective:** In this study we sought to examine if hyperaldosteronism is associated with OSA. **Methods:** The National Inpatient Sample (NIS) data was queried for adults with diagnosis of primary and secondary hyperaldosteronism during the years 2012 - 2015. Patients with hyperaldosteronism were identified using the international classification of disease (ICD-9). Each patient who was diagnosed with hyperaldosteronism was matched to randomly selected controls at a 1:4 ratio by age, gender and year of hospitalization. A multivariable logistic regression model was used to estimate the adjusted odds ratio (aOR) of OSA among patients with hyperaldosternoism. We adjusted for patient demographics, socioeconomic factors, hospital factors and clinical comorbidities. Subgroup analysis was performed based on gender, race and age groups; young adults (aged 18–35 years), middle aged (> 35-<55 years) and older adults (aged > 55 years). **Results:** There were 23,465 patients diagnosed with hyperaldosteronism identified. The mean age was 59 (standard error of the mean (SEM): 0.1. Females represented 48.5%. Compared to control, patients with hyperaldosteronism had higher prevalence of hypertension, CHF, stroke, obesity, diabetes, renal failure and lower prevalence of tobacco use and COPD. The proportions of African Americans were higher among patients with hyperaldosteronism compared to the control 30.1 vs 15.5, p<0.001. Patients with hyperaldosteronism had higher prevalence of OSA 16.4 vs 8.3, p<0.001. On multivariate analysis, hyperaldosteronism was independently associated with higher odds for OSA with aOR 2.01 (95%CI: 1.81–2.23) p<0.001. On subgroup analysis, similar findings were observed irrespective of gender, age group or race. **Conclusion:** Prevalence of OSA is higher among patients with hyperaldosteronism. Physicians may need to consider a case detection of hyperaldosteronism in patients with OSA and hypertension. Similarly we suggest to evaluate patients with hyperaldosteronism for OSA.

Bone and Mineral Metabolism

BONE DISEASE FROM BENCH TO BEDSIDE

Abaloparatide Prevents Unloading-Induced Bone Loss in Adult Rats

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Disuse osteoporosis (bone loss resulted from a reduction in mechanical loading) occurs in patients due to prolonged bed rest, paralysis and application of braces. Abaloparatide (ABL) is a synthetic peptide analog of PTHrP that has been shown to promote bone formation with limited bone resorption. ABL was approved by the FDA in 2017 to treat osteoporosis in postmenopausal women at high fracture risk. Yet, the ability of ABL to prevent bone loss in disuse is unknown. We hypothesized that ABL would prevent bone loss in the hindlimb unloading (HLU) rat model of disuse osteoporosis.

Adult male Wistar rats, 13–14 weeks of age, were assigned to 1 of 4 groups (10 rats/group): ambulatory + vehicle (CON-VEH), ambulatory + ABL (CON-ABL), HLU + vehicle (HLU-VEH) or HLU + ABL (HLU-ABL). The rats received a daily subcutaneous injection of ABL (25μg/kg/day) or vehicle for 28 days. Blood serum was collected on day 0, 7, 14 and 28 to examine the expression of bone markers such as osteocalcin (OCN) and TRAcP5b. pQCT scans were acquired at the proximal tibia at day 0 and 28 to measure changes in the total and trabecular vBMD. Following euthanasia, trabecular (Tb) and cortical (Ct) bone microarchitecture from femurs, tibias and L4 vertebrae were assessed using μCT. Femurs were mechanically tested to failure in 3-point bending to determine ultimate load (N) and stiffness (N/mm). Treatment effects were evaluated using 2-way ANOVA. Effects were considered significant at $p < 0.05$. Data reported as mean±SD.

HLU led to loss of bone density and structure that were prevented by ABL. Longitudinal pQCT revealed significant increases in total vBMD in ABL-CON (52±17%) vs. VEH-CON (20±5%); and in HLU-ABL (24±6%) vs. HLU-VEH (-2±3%) (p<0.001 for both). Significant differences were observed in the μCT analysis of the distal femur: Tb.BV/TV, thickness and BMD were 43.7%, 12.9% and 27.4% lower, respectively, in HLU-VEH compared to CON-VEH