and "Osteoporosis" (OST) (≤-2.5). We classified our patients according to fracture site, in vertebral, humeral, hip, tibial, malleolar-carpal, radial-ulnar and others, including rib fractures. Ratios were compared with χ^2 test, and continuous variables with one-way ANOVA.

Results: We enrolled 444 consecutive subjects with 543 fractures. n=315 (71.0%) subjects had low BMD: OST 25.9% and LBM 45.1%. Among subjects <50 years of age, 43.1% had LBM and 9.2% OST, while in those >50, 46.3% had LBM and 36.6% OST (p<0.0001). The cohort's mean lowest T/Z score was -1.6±1.2. Subjects with >1 fracture had more frequently low T/Z score (p=0.015). History of vertebral fractures provided the lowest mean T/Z score overall (-2.4±1.1), in females (-2.5±0.9) and subjects >50 (-2.5±1.1). The same holds true for hip fractures in males (-1.9±1.2) and subjects <50 (-2.1±1.4). Subjects with vertebral fractures had the lowest Hip (-1.7±1.2) and Spine (-2.3±1.2) T/Z scores, while those with tibial fractures had the lowest Radius T/Z score (-1.8±1.3). History of vertebral fractures was associated with the highest rate of OST (65.9%) in our overall population, males (50%), females (67.5%), subjects >50 (70.0%), while subjects with history of tibial fractures had the highest rate of normal BMD (46.2%), in males (80%) and females (50.4%), and those <50 (75.0%). Vitamin-D deficiency was present in 81.4% of all subjects. PTH was significantly higher in patients with OST compared to LBM or normal BMD (p=0.0006).

Discussion: Patients with history of high energy fractures need to be screened with DEXA scan early, as they have high likelihood to suffer from osteoporosis.

Pediatric Endocrinology
PEDIATRIC OBESITY, THYROID, AND CANCER

The Effect of Body Mass Index on the Peak Growth Hormone Level After Growth Hormone Stimulation Test in Children with Short Stature

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Objective: The aim of this study is to evaluate the effect of body mass index (BMI) on peak growth hormone (GH) response after GH stimulation test in children with short stature.

Methods: Data was obtained from retrospective review of medical records who visited the pediatric endocrinology at St. Vincent hospital of catholic university for short stature from January 2010 to June 2019. We studied 115 children (aged 3-17 years old) whose height was less than 3percentile for one's age and sex and who underwent GH stimulation test {GH deficiency (GHD) = 47, Idiopathic short stature (ISS) = 68}. Peak GH response was stimulated by dopamine (n=111), clonidine (n=7), glucagon (n=19), insulin (n=56) and arginine (n=32). Birth weight, parental height, chronologic age, bone age, height SDS (standard deviation score), weight SDS, BMI SDS hemoglobin, fT4, T3 TSH, cortisol, ACTH, GH, IGF-1 SDS, IGF-BP3 SDS and peak stimulated GH were analyzed.

Results: In the characteristics of subject, weight SDS and BMI SDS in GHD group were increased than ISS group (p<0.000, p=0.000). Free T4 was decreased in GHD group than ISS group (p=0.012). In total group, BMI SDS was associated negatively with peak GH level stimulated by dopamine (r=-0.419, p<0.000), insulin (r=-0.271, p=0.044) and arginine (r=-0.368, p=0.038), but did not showed correlation with peak GH level stimulated by glucagon. In GHD group, BMI SDS showed negative correlation with peak GH level using dopamine (r=-0.356, p=0.015) and arginine (r=-0.509, p=0.022). In ISS group, BMI SDS was correlated negatively with peak GH using dopamine (r=-0.330, p=0.007). In multivariate regression analysis of GHD group, weight SDS and BMI SDS were the only two significant predictors of peak GH response in stimulation test stimulated by dopamine (ß=-0.576, p=0.015) and arginine (ß=-0.097, p=0.022). In ISS group, only mother's height (ß=0.474, p=0.000) and TSH (ß=-2.251, p<0.000) were demonstrated statistically significant predictors of peak GH stimulated by dopamine in multivariate regression analysis. In case of using insulin as a stimulant in ISS group, there is nothing which has statistical significance as a predictor of peak GH response in multivariate regression analysis.

Conclusion: BMI was associated negatively with peak GH response after GH stimulation test in children with short stature, especially in GHD group.

Adrenal
ADRENAL - TUMORS

Adrenocortical Carcinoma - A Tertiary Center's Recent 5-Year Experience

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BACKGROUND: Adrenocortical carcinoma (ACC) is a rare endocrine malignancy with poor prognosis. The aim of