for BMD change at lumbar spine and femoral neck and for modification of CTX and BSAP levels ($\beta = 0.37$, $SE = 2.44$, $p < 0.001$).

Conclusion: TBS variation was independently predicted by phalangeal QUS measurement in Als treated BC women. Phalangeal QUS may represent an alternative tool to evaluate bone health also in this setting of patients.

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AB0824

THE EFFECTS OF CEMENT VOLUME DISTRIBUTION OF PERCUTANEOUS KYPHOPLASTY IN OSTEOPOROTIC VERTEBRAL FRACTURE

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Background: Osteoporotic vertebral compression fractures (OVCF) account for 45% of osteoporotic fractures. It cause severe back pain, unable walk or even stand Percutaneous kyphoplasty (PKP) is commonly used to treat painful OVCF, effective relieve pain and walking ability. But there have been few clinical studies that have specifically explored the relationship of the cement volume distribution rate and clinical outcomes.

Objectives: To access the effect of the cement volume distribution pattern in percutaneous kyphoplasty.

Methods: We retrospectively reviewed 126 cases of osteoporotic compression fractures treated with percutaneous kyphoplasty from Jan 2005 to May 2015. The cement volume distribution (CVD) was measured with X-ray and CT scan. 126 thoracolumbar vertebrae were divided into two groups based on CVD ratio: 51 vertebrae in group A with CVD ratio ≤ 2 ; 15 in group B with CVD ratio > 2 . The relationships of the cement volume distribution and clinical outcomes of pain, vertebral height and kyphotic angle change between the two groups were compared

Results: The mean duration of follow-up was 25 months (range 11~76), and the mean age was 68.2 ± 8.7 years. Correlation of volume of cement distribution measured by CT scan and X-ray is 89.3% ($P < 0.001$). The VAS improvement after kyphoplasty was no statistically significant ($P = 0.651$). Statistically greater height gain was observed in group B at the anterior border (4.42 ± 2.42 VS 1.83 ± 1.5 , $P = 0.035$) and at the center (4.64 ± 1.73 VS 3.01 ± 0.41 , $P = 0.044$). Subsequent fracture was 7 cases in group A and 4 case in group B.

Conclusion: Larger volume of cement distribution, greater correction of kyphosis. The greater distribution of the cement without leakage would be suggested when the limited volume of cement is injected.

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AB0825

IMPACT OF AROMATASE INHIBITOR TREATMENT ON BONE MINERAL DENSITY AND PREVALENT VERTEBRAL FRACTURE

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Background: In recent years, despite the growing incidence of breast cancer, a reduction in mortality has been observed. Adjuvant therapy with aromatase inhibitors (AI) has contributed to a longer disease free survival. However these molecules induce a hyper bone remodeling, modifying the bone architecture and thus increasing the fracture risk. The new guidelines indicate extension of treatment duration up to 10 years. So special precautions must be established in order to avoid bone mineral density (BMD) decrease and to reduce fracture risk.

Objectives: The aim of this study was to evaluate the impact of AI treatment on BMD and to screen vertebral fracture (VF) in post menopausal women with breast cancer.

Methods: A clinical cross sectional study was carried between August 2018 and December 2018, including post-menopausal women with non-metastatic breast cancer. Each woman had an extensive medical history and physical examination. BMD was measured using dual energy X absorptiometry DeXa at femoral neck, total hip and at lumbar spine. We used the WHO criteria for the diagnosis of osteoporosis and osteopenia. Vertebral fractures were screened by performing a vertebral fracture (VFA) image. VF grade 1 were excluded.

Results: Thirty-six post-menopausal women were examined in our rheumatology department. The mean age was 59.5 ± 10.38 years with an average body mass index (BMI) of 30.7 kg/m^2 [$15.81-38.28$]. The average age of menopause was 45.5 ± 5.25 years. The mean length of menopause was 14 years [2.1-31]. The mean duration of breast cancer follow-up was 71.7 months. 22 patients underwent chemotherapy and radiotherapy. Mean femoral neck BMD was 0.805 g/cm^3 [$0.647-1.049 \text{ g/cm}^3$] and the vertebral BMD was 1.003 g/cm^3 [$0.739-1.314 \text{ g/cm}^3$]. According to the WHO classification, 12 women (34.6%) had osteoporosis, 15 (42.3%) had osteopenia and 9 (19.2%) had normal BMD. 9 patients showed signs of osteoporosis at femoral neck and 8 had osteoporosis at lumbar spine. 10 subjects (27.8%) had VF identified by VFA, which were grade 2 and 3 in respectively 8 and 2 vertebra. No multiple VF were assessed. No statistically significant difference was found between women with and without VF for age, BMD value, and duration of follow-up or previous fragility fracture. We did not find a significant correlation between treatment length and BMD at either site: femoral neck ($p = 0.42$), total hip ($p = 0.783$) and lumbar spine ($p = 0.357$).

Conclusion: This data has shown that approximately one-third of patients receiving AI treatment have at least one vertebral fracture, and 40% had osteoporosis. Therefore we need to screen bone mineral density and fracture in women under AI therapy.

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AB0826

OSTEODENSITOMETRIC PROFILE DURING JUVENILE CELIAC DISEASE

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Background: Bone mineralization abnormalities are often seen in children with chronic gastrointestinal disease.

Among these pathologies, celiac disease (CD) is the most likely source of abnormalities of bone mineral density. These disorders are of multifactorial origin involving malabsorption, nutritional status, decreased physical activity and chronic inflammation.

Objectives: The purpose of this study was to determine the frequency and factors associated with lower bone mineral density in children with CD.

Methods: This is a retrospective study, over a period of 4 years (from January 2014 to December 2017) including children followed for CD who had a measurement of bone mineral density (BMD) by DEXA. Clinical, anthropometric and densitometry data (BMD at the femoral and vertebral site) were recorded.

Results: Thirty-six children were collected. Among them 29 were girls and 7 were boys. The average age was 11.94 years old. The average size was 137.8 cm. The average weight was 35.3 kg. The average body mass index (BMI) was 17.69 kg/m^2 [$13.05-21.69 \text{ kg/m}^2$]. The average vertebral BMD was 0.891 g/cm^3 . The average z-score was -1.08. BMD was normal in 26 cases. A decrease in bone mineral density