AB0836

THE INVESTIGATION OF BONE METABOLIC MARKERS ACCORDING TO THE FUNCTIONAL DISORDERS AMONG PATIENTS WITH RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is one of the causes of secondary osteoporosis, and steroids are often used in combination, therefore osteoporosis is highly associated with RA. Furthermore, joint disorders due to RA cause various degrees of dysfunction and ADL declines. The Steinbrocker classification is often used as the degree of dysfunction. Immobilization progresses with the progress of dysfunction, possibly causing severe osteoporosis.

Objectives: Of the 2238 cases in Akita Orthopedic Group omn Rheumatoid Arthritis (AORA) registry 2017, 101 cases simultaneously measuring bone metabolism markers (TARCP-5b, NTX, urinary DPD, BAP, total P1NP) and pentosidine were involved.

Methods: Patients were divided by Steinbrocker classification into class 1,2 (group A 84 cases) and class 3, 4 (group B 17 cases). we examined whether there is a difference in bone metabolism markers in each group according to Steinbrocker classification.

Results: The average age in group B (75.9) was significantly higher than group A (66.9) ($p = 0.01$). DAS 28 ESR was significantly higher in group B ($p < 0.01$). There was no difference in eGFR representing renal function between the two groups. The urinary DPD (nM/mM · Cr) and pentosidine (μg/ml) in group B was significantly higher than group A ($p < 0.01$). No difference was observed between the two groups in other bone metabolism markers.

Conclusion: Immobilization by long-term bed rest is known to enhance bone resorption. In 2002, Wakae reported DPD in urine showed a higher value in the group of not going out in femoral neck fracture cases. Based on the results of this study, urinary DPD showed a high value in RA group with high degree of dysfunction, which possibly reflected immobilization due to progress of functional disorder. Moreover, it is known that pentosidine will be higher in cases with high disease activity, severe osteoporosis will be occurred in the group with progressive functional disorder which is difficult to tight control.

Disclosure of Interests: None declared

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AB0837

INFLUENCE OF AUTO-IMMUNE HEPATOPATHIES ON BONE MINERAL DENSITY

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Background: Osteoporosis is a common complication of chronic liver diseases especially associated with Primary biliary cholangitis (PBC). Its occurrence during others autoimmune hepatopathies such as autoimmune hepatitis, primary sclerosing cholangitis has been described.

Objectives: The aim of our study was to assess the prevalence of osteoporosis in patients with autoimmune hepatopathies.

Methods: We carried out a retrospective study from January 1996 to December 2018, including all patients with auto-immune hepatopathy [autoimmune hepatitis/Primary biliary cholangitis (PBC)/Primary sclerosing cholangitis (PSC)/overlap syndrome]. Only patients who had bone mineral density (BMD) were selected.

Results: During the study period, 124 patients were included. The mean age of our patients was 55 years [18-87]. BMD has been realised in 51 patient [32 PBC/5AIH/3PSC/11 overlap Syndrome]. It was normal in 18 cases (35%), whereas 9 patients had osteopenia (18%) and 24 had osteoporosis (47%)[15PBC/2AIH/5overlap/2PSC].

The mean values of L2-L4 T-scores and femur total T-scores were -3.27 and -1.97, respectively. Osteoporotic patients had an average age of 58 years: 1 men, 3 premenopausal, and 20 postmenopausal women. The study of risk factors of osteoporosis has shown that 5patients underwent systemic corticosteroid. A tobacco intoxication has been noted in 1patient.

Biochemical analysis indicated a high level of cytotoxicity (superior to twice normal value) in 14 patient. Cholestasis was noted in 10 patients. The mean values of bilirubin was 23mg/l. Among the 24 patients with osteoporosis, 10 had positif antinuclear antibodies, 17 had positif anti-mitochondrial antibodies and 5 had positif anti-smooth muscle antibodies. Eight of patients were at an advanced stages of liver fibrosis at the moment of diagnosis.

Conclusion: Our study has shown that autoimmune liver diseases has an influence on bone mineral density as a bone mineral loss was noted in more than half of the cases. It should be considered for all patients with auto immune hepatopathy especially with long duration of corticosteroid treatment.

Disclosure of Interests: None declared

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AB0838

COMPARISON OF THE CHARACTERISTICS OF THE OSTEOPOROTIC PATIENTS WITH AND WITHOUT RHEUMATOID ARTHRITIS THROUGH RADIOFREQUENCY ECHOGRAPHIC MULTI SPECTROMETRY

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Background: Osteoporosis is a common bone disease characterized by reduction in bone mass accompanied by microarchitectural changes, resulting in brittle bones and in an increased risk of fractures. Rheumatoid arthritis is a well-known risk factor for the development of osteoporosis. With the introduction of radiofrequency echographic multi spectrometry (REMS), easily evaluation of the lumbar spine bone mineral density (BMD) ultrasound (BMDus) and hip BMDus is possible for early diagnosis of osteoporosis.

Objectives: The aim of this study is to compare the characteristics of the osteoporotic patients with and without rheumatoid arthritis through radiofrequency echographic multi spectrometry.

Methods: A total of 70 patients with osteoporosis were included in the study. 43% of them (30/70) had RA and 57% (40/70) were without RA. Patients were diagnosed with rheumatoid arthritis if they had a score of 6/10 or higher based on 2010 ACR/EULAR classification criteria for RA. Age, body mass index (BMI), lumbar spine BMDus, as well as total hip BMDus and fracture risk score (FRAX) were assessed.

Results: Patients with RA were significantly younger (69.3 ± 6.5 years) than those without RA (76.4 ± 5.0 years) ($p = 0.002$). BMI values did not differ significantly between the two groups (25.76 ± 4.82 kg/m² for patients with RA and 27.57 ± 5.37 kg/m² for patients without RA). Patients with and without RA did not show any significant differences between BMDus values of L1-L4 (0.629/0.607 g/cm² for L1, 0.692/0.688 g/cm² for L2, 0.761/0.743 g/cm² for L3 and 0.789/0.769 g/cm² for L4). Patients with RA had higher total lumbar spine T-score (-2.6 ± 0.8 standard deviations) compared to those without RA (-3.1 ± 0.5 standard deviations), but this difference was not significant ($p > 0.05$). Femoral neck BMDus, trochanteric BMDus and total hip BMDus were similar in the groups with and without RA (0.550/0.548 g/cm² for femoral neck, 0.710/0.693 g/cm² for trochanter, 0.688/0.678 g/cm² for total hip). FRAX score of the patients with RA was significantly higher (32.89% for 10-year probability of major osteoporotic fracture and 14.29% for 10-year probability of hip fracture) compared to the patients without RA (22.36% for 10-year probability of major osteoporotic fracture and 8.75% 10-year probability of hip fracture).

Conclusion: Although there were no significant differences in lumbar spine BMDus values and total hip BMDus values between the patients with and without RA, patients with RA showed higher 10-year probability of major osteoporotic fracture and hip fracture.

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