P101
IS VITAMIN D INSUFFICIENCY MORE COMMON IN MALES THAN FEMALES IN THE SUNNY UAE?
Haider M AL ATTIA

Objective: Vitamin D insufficiency appears to be more common in males than females in the UAE. The aim is to shed more light on this observation.

Material and Methods: 315 adult females with 3 dress styles and 108 males in Abu Dhabi, UAE, were assayed for serum 25-OH D. All had no history of vitamin D intake prior to the time of testing. 111 females dressed with fully covered clothing including face veil (Hijab or Niqab) (Group 1), 129 were covered but with face and hands exposed (group 2) and 75 were westerly dressed (Group 3). Females mean age was 45.5±14.4, range (15–87 yrs) vs. 45.9 ± 13.4 yrs in males, range (17–77 yrs), p=0.80. 250/315 (79.5 %) among females and 75 (69.5 %) of males were Middle Eastern and North African individuals, p=0.046. The remaining were heterogeneous individuals mainly Asians.

Results: Surprisingly, almost all the males 107/108 (99 %) had vitamin inadequacy (<30 ng/ml) vs. 288 in females (91.5 %), p=0.003. Their mean 25 (OH)D was 18±5.5 and 16.7±5.65 ng/ml respectively, p=0.045. 12/107 (11 %) of males exhibited vitamin deficiency (<12 ng/ml) vs. 60/288 (21 %) in the females p=0.028. Therefore, hypovitaminosis D by and large was more frequent in the male population, though females exhibited more tendency to have lower levels of the vitamin than males.

Conclusion: Such an exceptionally high prevalence of vitamin D inadequacy in this male population was an unexpected finding. Living in a year-round sunny environment was no guarantee for their vitamin adequacy.

P102
SECONDARY HYPERPARATHYROIDISM AND AGE OF MENOPAUSE IN PATIENTS WITH OR WITHOUT OSTEOPOROSIS DUE TO HYPOVITAMINOSIS D
Haider M AL ATTIA

Objective: Menopause or post menopause and hypovitaminosis D contribute to the development of osteoporosis. The aim is to determine the characteristics of females with hypovitaminosis D in relation to the presence of osteoporosis or not.

Material and Methods: 255 females between the age of 16–87 years underwent 25(OH)D assay and tested for other relevant biochemical parameters. They were Middle Eastern and North African Arabs, Asian and western individuals.

Results: 231 (90.5 %) were identified with hypovitaminosis D <30 ng/ml. 202/231 underwent DXA scanning. 45 had osteoporosis (22 %), 75 had osteopenia (37.5 %) and 82 (40.5 %) had normal outcome. The prevalence of hypovitaminosis in osteoporotic patients was 41/45 (91 %) vs. 76/82 (92.55) in those without, p=0.7. The mean values of serum 25(OH)D was 18.5±5.26 vs. 16.9±5.4 ng/ml in the two groups, respectively, p=0.13. The means of serum calcium, phosphorus, alkaline phosphatase were within normal values in both groups, all p=NS. Secondary hyperparathyroidism was noticed in both groups ((PTH; 93.7±54.7 vs. 84.9±36.9 ng/ml) (normal 15–68 ng/ml)), p=0.48. However, patients with osteoporosis were older than the others without (mean age of 59±16.9 vs. 41.5±10.6 years), p=0.0001. Osteoporotic patients had an average BMI of 29.6±7.6 vs. 30.7±5.56 in other patients, p=0.40. It becomes clear from the above that the age of menopause was the discriminatory marker between the two groups and not the secondary hyperparathyroidism.
Conclusion: Results strongly suggest that the anabolic physiological effect of estrogen on the bone health may override the resorptive effect exerted by the PTH.

P103
BMD CHANGE AFTER IBANDRONATE TREATMENT IN OSTEOPENIC POSTMENOPAUSAL ASIAN WOMEN
Sang Eun PARK¹, Young Woong BACK¹
¹Orthopaedic Surgery, Dongguk University International Hospital, Seoul, South Korea

Objective: Iblandronate is effective in the treatment of postmenopausal women with osteoporosis. But, there were few datas about ibandronate treatment in Korea. We evaluated the effect of ibandronate therapy on bone mass and compared the effectivity on BMD in 1-year treatment group. The aim of the study is to assess the effect of 1-year treatment with ibandronate on BMD in postmenopausal women with osteopenia or osteoporosis.

Material and Methods: BMD was assessed in 118 postmenopausal women with osteopenia or osteoporosis from March 2007-January 2011, 42 patents who treated with 2.5 mg/day of ibandronate were enrolled to study. BMD of lumbar spine (L2-L4) and femur were assessed by DXA at baseline, 12 months after treatment.

Results: The annual BMD of the lumbar spine showed a 9.11 % increase, while also positive changes were noted in the proximal femur as a 1.89 % increase. The BMD changes were 11 %(L: Lumbar spine) and 1.1 %(F: Femur) for the T-scores<-4.0, 6.3 %(L) and 0.9 %(F) for the T-scores -3.0~ -4.0, and 3.8 %(L) and 0.5 %(F) for the T-scores >-3.0, respectively.

Conclusion: This study suggests that ibandronate treatment in postmenopausal women with osteopenia or osteoporosis is effective in terms of improving BMD.

P104
SHORT-TERM AEROBIC EXERCISE ATTENUATE OSTEOPOROSIS IN POSTMENOPAUSAL WOMEN: CHANGES OF INFLAMMATORY MARKERS
Ana MARIA BOTELHO TEIXEIRA¹, Bakhtyar TARTIBIAN², Behzad HAJIZADEH²
¹University of Coimbra, Coimbra, Portugal, ²Urmia University, Urmia, Iran

Objective: Several evidence indicates that inflammation may contribute to the disorder of osteoporosis. The purpose of this study was to examine the effects of short-term aerobic exercise on serum inflammatory markers, in postmenopausal women.

Material and Methods: Thirty-eight healthy sedentary postmenopausal women aged 58~78 years participated in this study. Subjects were randomized to one of 2 groups: exercise (E, n=20) and control (Con, n=18) groups. The subjects in the E group performed aerobic exercise training (walking and jogging) up to 65 % of HRmax, three times a week for 12 weeks. Serum TNF-α, IL-6, PGE2 were measured at baseline and the end of week 12.

Results: Serum TNF-α and PGE decreased after the 12 week of exercise training (P<0.001) and also showed significant differences between the two groups. But IL-6 did not affect by aerobic exercise training and there was no significant difference between E and Con groups. Serum osteocalcin increased and showed significant difference between tow groups (P<0.016).

Conclusion: This study demonstrates that short-term aerobic exercise training has an effect in attenuating inflammation and augmenting bone health in postmenopausal women.


Acknowledgements: We would like to thank the subjects for their participation and effort.

P105
POSTURAL THERAPY AND ALGO-DYSFUNCTIONAL SYNDROME IN PATIENTS WITH LUMBOSACRAL SPINE DISEASES
Dana Maria DIMULESCU¹, Gheorghe CHIRITI¹
¹Medical Rehabilitation, University of Medicine and Pharmacy "Carol Davila", Bucharest, Romania

Objective: Achievement of a prospective, randomized study regarding efficiency of the physical-kinetics recovery program with emphasis on postural therapy in two groups of patients with lumbosacral spine diseases (radiculopathies, low back pain, sequelae after lumbar disk herniation surgery, lumbar canal stenosis); utilization of a clinical-functional assessment following the model of evidence-based research.

Material and Methods: The study was performed to NIRPMB, in two groups (group I - a study group and group II - the control group), either of 60 patients, males and females, with radiculopathies, low back pain, sequelae after lumbar disk herniation surgery, lumbar canal stenosis. Distinction between the two groups was made based on the physical-kinetic rehabilitation methodology: study group was emphasized on postural therapy. Clinico-functional parameters assessed were pain, physical dysfunctions (index finger-ground, lumbosacral spine statics disorders, muscle strength, Lassegue, osteotendinous reflexes), disabilities (ADL, movement ability, the absenteeism, work ability-return to activity).

Results: The pain improved with 67.40 % (group 1) vs. 56.53 % (group 2); cumulated physical dysfunctions