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P301 - FRACTURE INDEX IS EFFECTIVE IN THE ASSESSMENT OF HIP FRACTURE RISK IN A CLINICAL ORTHOPAEDIC SETTING: A COHORT STUDY

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The increasing life expectancy is known to be associated with a greater frailty of elderly people and with a number of chronic and degenerative diseases. Osteoporosis and its complications – especially hip fractures, represent, probably, one of the most frequent disease in western population.

Given the increasing importance of the morbidity and mortality associated with hip fractures, it is fundamental to identify screening methods in order to prevent them appropriately. Optimal identification of high-risk individuals would be a simple questionnaire assessing easy-to-know information on patients, linked to hip fracture risk.

The FRACTURE index is a model identifying variables that could be easily assessed in either clinical practice or by self-administration. This model was developed and validated by Black for the screening of risk factors among patients in the orthopedics clinical practice allowing important insights about patient 5-years probability of hip fracture occurrence (every 2 units of FRACTURE index there is about a two fold increase of 5-yrs hip fracture probability).

The assessment tool is a set of seven key parameters that can be easily asked to a patient within the usual orthopedic practice: these parameters include age, BMD T-score, fracture after age 50 years, maternal hip fracture after age 50, weight less than or equal to 57 kg, smoking status, and use of arms to stand up from a chair.

We performed an epidemiological cohort study, evaluating the FRACTURE index among 8590 patients recruited in 145 Italian Orthopedics divisions. Among the overall patients recruited, 3497 had a recent hip fracture. About 80% of fractured patients had a FRACTURE index >8/15. Our epidemiological cohort study confirms the validity of FRACTURE score index assessment in a clinical setting to establish the hip fracture risk probability.

P302 - GENDER DIFFERENCES IN BONE MASS OF COLLEGIATE STUDENTS IN MALAYSIA

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It is well recognized that gender is an important factor in determinant of the risk of osteoporotic fractures in later life. However, there are still discrepancies concerning the magnitude of gender differences in bone mass and factors attributed to the effect of gender on bone mass acquisition during growing years. The objective of this study was to examine the effect of gender and its attributed factor to bone health status in 70 healthy collegiate students aged 18-21 years studying at the Health Campus, University Science Malaysia in Kelantan, Malaysia. Bone mass was measured at the total body (TB), lumbar spine L2-L4 (LS) and proximal femur (PF) using the dual energy X-ray absorptiometry (DXA). Mean age of the subjects was 20.5±0.9 years with 67% were females. Results showed that significant gender differences were observed in bone mineral content (BMC) at all skeletal sites measured ($P<0.0001$) with male subjects had a significantly higher BMC of TB (2579.3±90.2 vs. 2055.4±47.2 g/cm^2), LS (49.3±1.6 vs. 39.8±0.9 g/cm^2) and PF (35.3±1.4 vs. 25.2±0.7 g/cm^2) compared to their female counterparts. On average, the TB, LS and PF BMC were 25.5%, 23.7% and 39.0%, respectively, greater in males than that of females, although body mass index (BMI) was not differ significantly between genders. In contrast, the significant differences of gender in BMC of all skeletal sites were disappeared after adjusting for bone size of skeletal region measured. In summary, these results indicate that the difference in bone mass between males and females is partially attributed to the greater bone size of males. In addition, this result also suggests that the importance of adjusting for bone size when assessing other lifestyle and dietary factors associated with peak bone mass acquisition in healthy youth.

P303 - OSTEOPOROSIS AND ATHEROSCLEROSIS IN MENOPAUSE - MODERN VIEW TO THE PROBLEM

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Objective: The purpose of the research is to determine possible pathogenetic links in the development of atherosclerosis and osteoporosis in menopause women with cardio-vascular diseases depending on changes of intima media of carotid.
Material and Methods: 319 women aged from 45 to 82 (average age is 63,5±5,9) in postmenopause lasting average 12,1±7,7 years were observed. 96 of them were subdivided into groups depend of the state of intima media of carotid. Determination of IL-6, IL-8,IL-10, resorption bone marker (C-terminale polypeptide Cross-Laps), bone formation markers (osteocalcine), osteoprotegerin (OPG) level were done by immune enzyme method. Ultrasonic Doppler investigation of carotids with the help of Scanner Pie medical 350 was done to examine the thickness of intima media (TIM). Patients were undergone ultrasound densitometry by apparatus "Achilles+" ("Lunar", USA).
Results: Revealed changes indicate the lipid exchange disturbance in menopause women. This disturbance is mostly pronounced in women with cardio-vascular diseases and perhaps, it's the cause of the development of intima media lipomatosis. In menopause women with cardio-vascular diseases and lipomatosis of intima-media decrease of BMD and markers of bone formation were revealed. Changes of cytokine profile in menopause women with cardio-vascular diseases has the same tendency to increase IL- 6, IL-8 as in the control group. The level IL-8 was increased more pronounced in patients with lipomatosis. Reliable decrease of OPG level in groups with cardio-vascular diseases in comparison with control is more pronounced in group with lipomatosis of intima-media of carotid.
Conclusion: Decrease of OPG level in menopausal women with cardio-vascular diseases, particular in lipomatosis of vessels plays an important role in pathogenesis of atherosclerosis and oste-