



Selección de Resúmenes de Menopausia

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María Soledad Vallejo. Clínica Quilín. Universidad de Chile

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Bisphosphonates and the risk of atypical femur fractures

Dennis M Black 1, Katherine Condra 2, Richard Eastell 3

Bisphosphonates are effective in reducing hip and other fractures. However, concerns about atypical femur fractures (AFFs) have contributed to substantially decreased bisphosphonate use, and hip fracture rates may be increasing. Despite this impact, important uncertainties remain regarding AFF risks including the association between bisphosphonate use and other risk factors such as BMD, age, weight, and race. To address this evidence gap, a cohort study of 196,129 women ≥ 50 years of age in the Southern California Kaiser Permanente HMO women (with ≥ 1 bisphosphonate prescription) were studied; the primary outcome was radiographically-adjudicated AFF between 2007 and 2017. Risk factors including bisphosphonate use and race were obtained from electronic health records. Multivariable Cox models were used for analysis. Benefit-risk was modeled for 1-10 years of bisphosphonates to compare fractures prevented vs. AFFs associated. Among 196,129 women, 277 (0.1%) sustained AFFs. After multivariable adjustment, AFF risk increased with longer bisphosphonate duration: hazard ratio (HR) increased from HR = 8.9 (95%CI: 2.8,28) for 3-5 years to HR = 43.5 (13.7,138.1) for >8 years. Hip BMD, surprisingly, was not associated with AFF risk. Other risk factors included Asian ancestry (HR = 4.8 (3.6, 6.6)), short stature, overweight, and glucocorticoid use. Bisphosphonate discontinuation was associated with rapid decrease in AFF risk. Decreases in osteoporotic and hip fractures risk during 1-10 years of bisphosphonates far outweighed the increase AFF risk in Caucasians, but less so in Asians. In Caucasians, after 3 years 149 hip fractures were prevented with 2 AFFs associated compared to 91 and 8 in Asians. The evidence for several potential mechanisms is summarized with femoral geometry being the most likely to explain AFF risk differences between Asians and Caucasians. The results from this new study add to the evidence base for AFF risk factors and will help inform clinical decision-making for individual patients about initiation and duration of bisphosphonate therapy and drug holidays.

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Association of physical activity levels and prevalence of major degenerative diseases: Evidence from the national health and nutrition examination survey (NHANES) 1999-2018

Jose Luis Perez-Lasierra 1, Jose A Casajús 2, Alejandro González-Agüero 3, Belen Moreno-Franco 4

Objectives: Degenerative diseases are associated with lower healthy life expectancy and higher mortality. Physical activity (PA) has demonstrated a fundamental role in the prevention and control of several pathologies associated to the aging process. The aim of this study was to analyze the association of PA with the prevalence of sarcopenia, osteoporosis and osteoarthritis in non-institutionalized American population. Methods: Cross-sectional study carried out in participants aged ≥ 50 years from the 1999-2018 National Health and Nutrition Examination Survey (NHANES). Sarcopenia was defined using appendicular lean mass adjusted for body mass index (ALM:BMI; men <0.789 kg/m², women <0.512 kg/m²). Osteoporosis was defined as bone mineral density T-score ≤ -2.5 of femur neck. Osteoarthritis and PA were self-reported, and total PA was used to classify participants in groups. The Odds Ratios among the different PA levels for each disease were examined. Results: Performing at least 150 MET-min/week of PA was associated with reduced odds for sarcopenia; performing >1800 MET-min/week was associated with reduced odds for osteoporosis; and performing 150-1800 MET-min/week of PA was associated with reduced odds for osteoarthritis after adjust the results by several confounders. Conclusions: The benefits of PA in sarcopenia, osteoporosis, and osteoarthritis prevention are evident among Americans aged ≥ 50 years.

Basic Clin Neurosci. May-Jun 2021;12(3):383-394. doi: 10.32598/bcn.2021.2634.1. Epub 2021 May 1.

β -Amyloid Formation, Memory, and Learning Decline Following Long-term Ovariectomy and Its Inhibition by Systemic Administration of Apigenin and β -Estradiol

Seyed Behnamedin Jameie 1, Abbas Pirasteh 2, Ali Naseri 2, Melika Sadat Jameie 3, Mona Farhadi 4, et al

Introduction: The increasing cases of Alzheimer Disease (AD) has caused numerous problems. The risk of developing AD increases in menopausal women, too. Apigenin and β -estradiol are effective antioxidant and neuroprotective agents. We conducted the present study to explore their combined effects on β -amyloid plaque formation, memory, and learning in ovariectomized rats. **Methods:** Forty-two Wistar rats were randomly assigned into 6 groups: 1) ovariectomized (OVX), 2) OVX + apigenin, 3) OVX + β -estradiol, 4) OVX + apigenin + β -estradiol, 5 & 6) vehicle shams for E2 and API, and 7) surgical sham. Treatment was done with apigenin and β -estradiol. Then, we studied the formation of β -amyloid plaques, neuronal density in the hippocampus area, apoptosis, memory, and learning. **Results:** Findings showed the significant formation of β -amyloid plaques in the hippocampus of OVX animals and their memory impairment. Apigenin and β -estradiol significantly reduced the number of β -amyloid plaques, as well as the symptoms of memory impairment and learning, and decreased the expression of caspase-3 in treated animals. **Conclusion:** Accordingly, β -estradiol and apigenin could have more potent therapeutic effects on AD.

Ind Psychiatry J. 2021 Oct;30(Suppl 1):S140-S148. doi: 10.4103/0972-6748.328805. Epub 2021 Oct 22.

Comparative safety and efficacy of tibolone and escitalopram in postmenopausal women

Rajnish Raj 1, Namita Sharma 1, Rohit Garg 1, Ekram Goyal 1

Background: A high prevalence of psychiatric disorders, particularly depressive and anxiety disorders among women is observed through the postmenopausal stage. **Aim:** The aim of this study is to compare the safety and efficacy of tibolone (TIB) and escitalopram (ESCIT) in postmenopausal women (PMW). **Materials and methods:** It was an interventional, open-label, hospital-based, follow-up study conducted on 60 PMW with the diagnosis of depression as per the Diagnostic and Statistical Manual of Mental Disorder-5 criteria. Patients were divided into two groups of 30 each, i.e. Group I (TIB-2.5 mg/day) and Group II (ESCIT-10-20 mg/day). The primary outcome was assessed for change in climacteric symptom scores on Greene's Climacteric Scale (GCS), severity of depression and anxiety on Hamilton Rating Scale for Depression (HAM-D) and Hamilton Anxiety Rating Scale (HAM-A), and sexual functioning on Arizona Sexual Experience Scale (ASEX). The secondary outcome of well-being was assessed on World Health Organization Quality of life (QOL)-BREF. All the observations were carried out from baseline and at 2, 4, 8, and 12 weeks. **Results:** Both the groups showed significant improvement in climacteric and depressive symptoms. However, at the 8th and 12th weeks, mean \pm standard deviation scores were significantly lower in Group I (GCS score - 24.80 ± 4.92 , 20.30 ± 3.56 ; HAM-D score - 16.57 ± 5.83 , 10.2 ± 5.67) compared to Group II (GCS score - 27.27 ± 5.83 and 23.33 ± 5.70 , HAM-D score - 19.97 ± 7.98 and 16.17 ± 10.11). No significant difference between the groups was seen for anxiety on HAM-A scores. Only in Group I, there was significant improvement in ASEX scores. QoL in Group I had shown significant improvement in physical and psychological domain compared to Group II at different time interval, i.e. 4th and 8th week onward. In Group I, Alternative Dispute Resolution was reported to be 23.3%, whereas it was 56.7% in Group II. However, none were serious to warrant discontinuation. **Conclusion:** TIB was better than ESCIT in improving depression, climacteric symptoms, and physical and psychological domain of QoL with an additional benefit of restoring sexual functioning.

Reumatol Clin (Engl Ed). 2021 Dec 11;S2173-5743(21)00212-4. doi: 10.1016/j.reumae.2021.07.003.

Antonio Juan 1, Guillem Frontera 2, Ana Paula CACHEDA 3, Mónica Ibáñez 3, Javier Narváez 4, et al.

Objective: To analyse determinants of mortality at 15 years in a population over 60 years of age and physically active.

Methods: This is a **Bone health and predictors of 15-year mortality in a physically active population**

prospective longitudinal study. After 15 years of participating in an active ageing programme, participants were contacted by telephone to verify their state of health and to determine whether in that time they had had any fractures. **Results:** 561 individuals over 60 years of age were included, 82% of whom were women. Only differences in densitometric data, FRAX values and history of previous fracture at baseline characteristics were found between the group that died at 15 years and the group that remained alive. The only variables that were related to mortality risk

were the basal data of the densitometric t-score (OR = .50, $P < .001$) and history of fracture in any location (OR = 2.44, $P < .033$). Conclusions: The value of bone mineral density could be considered as a useful biomarker to calculate the risk of mortality in people over 60 years old with a physically active lifestyle.

J Diabetes Metab Disord. 2021 Jul 6;20(2):1229-1237. doi: 10.1007/s40200-021-00847-7. eCollection 2021 Dec.
Studying the relationship between cognitive impairment and frailty phenotype: a cross-sectional analysis of the Bushehr Elderly Health (BEH) program

Farshad Sharifi 1, Mahtab Alizadeh Khoiee 1 2, Reihane Aminroaya 2, Mahbube Ebrahimpur 1, Gita Shafiee 3, et al. Background: Some pathophysiological effects of physical frailty and cognitive impairment might be similar; therefore, finding the associations in epidemiologic studies could guide clinicians and researchers to recognize effective strategies for each type of frailty such as frailty phenotype and frailty index, which in turn will result in a preventive approach. The study aimed to reveal which components of frailty phenotype are more associated with cognitive impairment. The findings of this study may help other researchers clarify the related pathways. Methods: This is a cross-sectional analysis of the results of the second phase of Bushehr Elderly Health Program; a community-based elderly prospective cohort study conducted in 2015-2016. The participants were selected through a multistage stratified cluster random sampling method. Frailty was assessed based on the Fried frailty phenotype criteria. Cognitive impairment was assessed by the Mini-Mental State Examination (MMSE), the Mini-Cog, and the Category Fluency Test (CFT). Multiple logistic regression models were applied to determine the association between frailty and cognitive impairment. Depression trait was assessed using the Patient Health Questionnaire-9 (PHQ-9). Activities of daily living were assessed using the Barthel Index and Instrumental Activities of Daily Living (IADLs) using Lawton's IADL. Results: The study conducted among people ≥ 60 years old ($N = 2336$) with women consisting 51.44% of the sample group. The mean age of the participants was 69.26 years old. The prevalence of pre-frailty and frailty were 42.59% and 7.66%, respectively. In the fully adjusted model, the odds ratio of the association between pre-frailty and frailty with cognitive impairment was 1.239, 95% CI: 1.011 - 1.519 and 1.765, 95% CI: 1.071 - 2.908, respectively (adjusted for age, sex, education, body mass index, smoking, diabetes mellitus, PHQ- 9, Barthel Index, and IADLs). In the fully adjusted multiple logistic regression models, all of the components of Fried frailty phenotype were significantly related to cognitive impairment except weight loss. Conclusion: Cognitive impairment may be associated with frailty phenotype. Moreover, low strength and function of muscles had a stronger association with cognitive impairment. It seems that a consideration of cognitive impairment assessment in older people along with frailty and vice versa in clinical settings is reasonable.

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Body weight and fat mass across the menopausal transition: hormonal modulators

Pierluigi Moccia 1, Rocío Belda-Montesinos 2, Aitana Monllor-Tormos 1, Peter Chedraui 3 4, Antonio Cano 1 5 Background: The role of the menopause in weight gain is an understudied yet important field, given the rising prevalence of obesity and its associated risk of disease. Objective: To review the current evidence regarding the impact of the menopausal transition on changes in body composition and fat accrual in women and the hormonal mechanisms underlying the process. Methods: A critical appraisal of the current literature by experts in the field. Results: Menopause is associated with an overall increase in fat mass, which tends to accumulate around the waist. There is also a decrease in lean mass, particularly evident in the lower limbs. Reduced energy expenditure (EE) has been confirmed in parallel with increased food intake, the latter being more evident in experimental models. A prominent role has been found for the estrogen receptor (ER) alpha isoform in fat accrual. Human studies suggest a role for androgens in central fat accumulation and type 2 diabetes. FSH is a key factor in the process of fat accumulation, but only in rodents. Clinical studies suggest that these endocrine alterations are insufficient to explain the observed changes. Conclusions: The menopausal transition is associated with an increase in adiposity, which accumulates preferentially in the abdominal area. Hypoestrogenism and the imbalance of the androgen/estrogen ratio are strong candidates to explain the phenomenon, although other hormonal factors probably also play a role. The impact on risk of disease is still insufficiently known, although an association with risk factors, such as an unfavorable lipid profile or insulin resistance seems likely.