Selección de Resúmenes de Menopausia

Semana del 3 al 9 de junio 2020
María Soledad Vallejo. Clínica Quilín. Universidad de Chile

The association between a fracture risk tool and frailty: Geelong Osteoporosis Study.

Tembo MC1, Holloway-Kew KL2, Mohebbi M3, Sui SX2, Hosking SM2,4, Brennan-Olsen SL5,6,7, et al.

BACKGROUND: Frailty is characterised by age-related declines in physical, psychological and social functioning. Features of frailty overlap with risk factors for fragility fractures. The aim of this study was to investigate the association between the fracture risk assessment tool (FRAX®) and frailty. METHODS: In cross-sectional analysis, frailty status was determined for participants aged 60-90 yr at 15-year follow-up of the Geelong Osteoporosis Study, using a modified Fried frailty phenotype. Using the FRAX on-line tool, scores for hip and major osteoporotic fracture (MOF) were calculated with and without bone mineral density (BMD). Using the area under Receiver Operating Characteristic (AUROC) curves, and FRAX scores calculated at the baseline visit for these participants, we investigated the association of FRAX and frailty 15 years later. RESULTS: Forty-seven of 303 women (15.5%) and 41 of 282 men (14.5%) were frail at the 15-year visit. There was a gradient of increasing median FRAX scores from robust to frail. For example, for women, median MOF-FRAX without BMD increased from 5.9 for the robust to 7.5 for the pre-frail and 14.0 for the frail (p < 0.001). In secondary analyses, an association was observed between FRAX and frailty over 15 years, with the highest AUROC for women being 0.72 for MOF-FRAX with BMD, and for men, 0.76 hip-FRAX without BMD. CONCLUSION: An association was observed between FRAX and frailty where frail men and women had higher FRAX-scores compared to the other groups. Preliminary data suggest that FRAX, with or without BMD, may be useful in enhancing the information on frailty. Further research using larger datasets will be required to explore this.

Potential Importance of Immune System Response to Exercise on Aging Muscle and Bone.

Cornish SM1, Chilibeck PD2, Candow DG3.

PURPOSE OF REVIEW: The age-related loss of skeletal muscle and bone tissue decreases functionality and increases the risk for falls and injuries. One contributing factor of muscle and bone loss over time is chronic low-grade inflammation. Exercise training is an effective countermeasure for decreasing the loss of muscle and bone tissue, possibly by enhancing immune system response. Herein, we discuss key interactions between the immune system, muscle, and bone in relation to exercise perturbations, and we identify that there is substantial "cross-talk" between muscle and bone and the immune system in response to exercise. RECENT FINDINGS: Recent advances in our understanding of the "cross-talk" between muscle and bone and the immune system indicate that exercise is likely to mediate many of the beneficial effects on muscle and bone via their interactions with the immune system. The age-related loss of muscle and bone tissue may be partially explained by an impaired immune system via chronic low-grade inflammation. Exercise training has a beneficial effect on immune system function and aging muscle and bone. Theoretically, the "cross-talk" between the immune system, muscle, and bone in response to exercise enhances aging musculoskeletal health.

Managing thromboembolic risk with menopausal hormone therapy and hormonal contraception in the COVID-19 pandemic: Recommendations from the Spanish Menopause Society, Soc. Española de Ginecología y Obstetricia and Sociedad Española de Trombosis y Hemostasia.

Ramírez I1, De la Viuda E2, Baquedano L3, Coronado P4, Llaneza P5, Mendoza N6, Otero B7, Sánchez S8, Cancelo MJ9, Páramo JA10, Cano A11.

COVID-19 is associated with a systemic inflammatory response with activation of coagulation in symptomatic patients. The possibility of coagulopathies in peri- and postmenopausal women taking estrogen therapies makes it necessary to consider antithrombotic strategies, such as the use of low molecular weight heparins (LMWH) at specific prophylactic or treatment doses for each individual case, depending on the risk factors that each woman presents. For such reasons, a panel of experts from various Spanish scientific societies has met to develop usage recommendations for managing menopausal women taking menopausal hormone therapy (MHT) or combined hormonal contraception (CHC) during the COVID-19 pandemic.

Cognitive markers of dementia risk in middle-aged women with bilateral salpingo-oophorectomy prior to menopause.
Gervais NJ1, Au A2, Almey A2, Duchesne A3, Gravelsins L2, Brown A2, Reuben R2, Baker-Sullivan E2, et al
Oophorectomy prior to menopause is associated with late-life dementia. Memory decline may start within 6 months after oophorectomy in middle-aged women, suggested by lower verbal and working memory performance. Unknown is whether such changes persist beyond 6 months, and whether they are reversed by estradiol. Short-term benefits of estradiol on verbal memory following oophorectomy were observed in one study, but longer term effects remain unknown. In the present study, middle-aged BRCA1/2 mutation carriers with early oophorectomy at least 1 year prior to study onset were tested on verbal and working memory with results stratified by (1) current estradiol use (n = 22) or (2) no history of estradiol use (n = 24), and compared to age-matched premenopausal controls (n = 25). Both memory abilities were adversely affected by oophorectomy, but only working memory was maintained by estradiol. Estrogen metabolite levels correlated with working memory, suggesting a role for estradiol in preserving this ability. Memory decline appears to persist after early oophorectomy, particularly for women who do not take estradiol.

Are Oxidative Stress and Inflammation Mediators of Bone Loss due to Estrogen Deficiency? A Review of Current Evidence.
Mohamad NV1, Ima-Nirwana S1, Chin KY1.
Osteoporosis is one of the major health issues associated with menopause-related estrogen deficiency. Various reports suggest that the hormonal changes related to menopausal transition may lead to derangement of redox homeostasis and ultimately oxidative stress. Estrogen deficiency and oxidative stress may enhance the expression of genes involved in inflammation. All these factors may contribute, in synergy, to the development of postmenopausal osteoporosis. Previous studies suggest that estrogen may act as an antioxidant to protect the bone against oxidative stress, and as an antiinflammatory agent in suppressing pro-inflammatory and pro-osteoclastic cytokines. Thus, the focus of the current review is to examine the relationship between estrogen deficiency, oxidative stress and inflammation, and the impacts of these phenomena on skeletal health in postmenopausal women.

Associations of Perfluoroalkyl Substances with Incident Natural Menopause: the Study of Women's Health Across the Nation.
Ding N1, Harlow SD1, Randolph JF2, Calafat AM3, Mukherjee B4, Batterman S5,6, Gold EB7, Park SK1,5.
CONTEXT: Previous epidemiologic studies of per- and polyfluoroalkyl substances (PFAS) and menopausal timing conducted in cross-sectional settings were limited by reverse causation because PFAS serum concentrations increase after menopause. OBJECTIVES: To investigate associations between perfluoroalkyl substances and incident natural menopause. DESIGN AND SETTING: A prospective cohort of midlife women, the Study of Women's Health Across the Nation, 1999-2017. PARTICIPANTS: 1120 multi-racial/ethnic premenopausal women aged 45-56 years. METHODS: Serum concentrations of perfluoroalkyls were quantified by high performance liquid chromatography-isotope dilution-tandem mass spectrometry. Natural menopause was defined as the bleeding episode prior to at least 12 months of amenorrhea not due to surgery or hormone use. Cox proportional hazards models were used to calculate hazard ratios (HRs) and 95% confidence intervals (CIs). RESULTS: Participants contributed 5466 person-years of follow-up, and 578 had incident natural menopause. Compared to the lowest tertile, women at the highest tertile of baseline serum concentrations had adjusted HR for natural menopause of 1.26 (95%CI: 1.02-1.57) for n-

perfluorooctane sulfonic acid (n-PFOS) (Ptrend=0.03), 1.27 (95%CI: 1.01-1.59) for branched-PFOS (Ptrend=0.03), and 1.31 (95%CI: 1.04-1.65) for n-perfluorooctanoic acid (Ptrend=0.01). Women were classified into four clusters based on their overall PFAS concentrations as mixtures: low, low-medium, medium-high, and high. Compared to the low cluster, the high cluster had a HR of 1.63 (95% CI: 1.08-2.45), which is equivalent to 2.0 years earlier median time to natural menopause. CONCLUSION: This study suggests that select PFAS serum concentrations are associated with earlier natural menopause, a risk factor for adverse health outcomes in later life.

The risk of hip and non-vertebral fractures in type 1 and type 2 diabetes: A systematic review and meta-analysis update.

Vilaca T1, Schini M2, Harnan S3, Sutton A4, Poku E5, Allen IE6, Cummings SR7, Eastell R8.

BACKGROUND: Diabetes is associated with increased fracture risk but we do not know what affects this risk. We investigated the risk of hip and non-vertebral fractures in diabetes and whether this risk was affected by age, gender, body mass index, diabetes type and duration, insulin use and diabetic complications. METHODS: We selected a previously published review to be updated. MEDLINE, Embase and Cochrane databases were searched up to March 2020. We included observational studies with age and gender-adjusted risk of fractures in adults with diabetes compared to adults without diabetes. We extracted data from published reports that we summarised using random effects model. FINDINGS: From the 3140 records identified, 49 were included, 42 in the hip fracture analysis, reporting data from 17,571,738 participants with 319,652 fractures and 17 in the non-vertebral fracture review, reporting data from 2,978,487 participants with 181,228 fractures. We found an increase in the risk of fracture in diabetes both for hip (RR 4.93, 3.06-7.95, in type 1 diabetes and RR1.33, 1.19-1.49, in type 2 diabetes) and for non-vertebral fractures (RR 1.92, 0.92-3.99, in type 1 and RR 1.19, 1,11-1.28 in type 2). At the hip, the risk was higher in the younger population in both type 1 and type 2 diabetes. In those with type 2 diabetes, longer diabetes duration and insulin use was associated with an increased risk. We did not investigate the effect of bone density, falls, anti-diabetic drugs and hypoglycemia. CONCLUSION: Diabetes is associated with an increase in both hip and non-vertebral fracture risk.

Legume and Nuts Consumption in Relation to Odds of Breast Cancer: A Case-Control Study.

Sharif Y1,2, Sadeghi O1,2, Benisi-Kohansal S2, Azadbakht L2, Esmaillzadeh A2,3,4.

Previous studies on the association between legume and nuts intake and risk of breast cancer have mainly been focused on individual components of legume or nuts, rather than consumption of the whole food group. This study aimed to investigate the relation between legume and nuts intake in relation to breast cancer in Iranian women. In this population-based case-control study, we enrolled 350 pathologically confirmed new cases of breast cancer and 700 controls which were matched with cases in terms of age and socioeconomic status. Dietary intakes were assessed using a validated block-format 168-item semi-quantitative food frequency questionnaire. Legume intake was computed by summing up the consumption of lentils, peas, chickpeas, and different kinds of beans, including red beans and pinto beans. To calculate nuts consumption, we summed up intake of mixed nuts, almond, peanut, walnut and hazelnut. Data on potential confounding variables were also collected using pre-tested questionnaires. Mean consumption of legume and nuts among cases and controls were 14.7 ± 15.0 and 2.3 ± 5.6, respectively. A significant inverse association was found between legume intake and breast cancer (OR: 0.41, 95% CI: 0.30-0.57); such that after adjusting for confounders, participants in the top tertile of legume intake had 46% lower odds of breast cancer compared with those in the bottom tertile (OR: 0.54, 95% CI: 0.36-0.88). Such inverse association was seen among postmenopausal women (OR: 0.51, 95% CI: 0.31-0.85) and also among normal-weight participants (OR: 0.49, 95% CI: 0.29-0.82). In terms of nuts intake, it was inversely associated with odds of breast cancer (OR: 0.16, 95% CI: 0.11-0.23). This association remained significant even after taking potential confounders into account (OR: 0.15, 95% CI: 0.09-0.26). The same association was also seen in premenopausal women (OR: 0.21, 95% CI: 0.14-0.31), postmenopausal women (OR: 0.23, 95% CI: 0.13-0.42), normal-weight (OR: 0.15, 95% CI: 0.08-0.28), and overweight or obese people (OR: 0.27, 95% CI: 0.10-0.71). Our findings on the inverse association of legume and nuts intake with odds of breast cancer support the current recommendations on these foods. Prospective studies are needed to further examine this link.