Selección de Resúmenes de Menopausia

Semana del 8 a 14 de febrero, 2023
María Soledad Vallejo. Clínica Quilín. Universidad de Chile

Effect of menopausal hormone therapy on COVID-19 severe outcomes in women - A population-based study of the US National COVID Cohort Collaborative (N3C) data

Yilin Yoshida 1, San Chu 2, Yuanhao Zu 3, Sarah Fox 4, Franck Mauvais-Jarvis 5; N3C consortium

Whether menopausal hormone therapy (MHT) lessens the severity of COVID-19 among women is unclear. Leveraging a U.S. national COVID-19 cohort and a cross-sectional analysis, we found MHT use was marginally associated with a lower risk of mortality (odds ratio [OR] 0.73, 95 % CI 0.53-1.01) and significantly associated with a lower risk of prolonged hospital stay (0.7, 0.49-0.99) among inpatient women. When stratifying by MHT type, estrogen-only and estrogen-plus-progestin therapies had a more prominent protective effect than progestin-only therapy, although this difference did not achieve statistical significance. Women with COVID-19 can continue to use MHT. Clinical trials are needed to evaluate MHT's therapeutic effect on COVID-19, especially in terms of severity.

Determinants and Effects of Vitamin D Supplementation in Postmenopausal Women: A Systematic Review

Mohammed M Hassanein 1, Hasniza Zaman Huri 1, Kauser Baig 2, Abduelmula R Abduelkarem 3

Hormonal fluctuations, excessive clothing covering, sunscreen use, changes in body fat composition, a vitamin D-deficient diet, and a sedentary lifestyle can all predispose postmenopausal women to vitamin D deficiency. An effective supplementation plan requires a thorough understanding of underlying factors to achieve the desired therapeutic concentrations. The objective of this study was to conduct a systematic review of the predictors that affect vitamin D status in postmenopausal women. From inception to October 2022, we searched MEDLINE, Embase, Web of Science, Scopus, and clinical trial registries. Randomized clinical trials of postmenopausal women taking supplements of vitamin D with serum 25-hydroxyvitamin D (25(OH)D) measurement as the trial outcome were included. Two independent reviewers screened selected studies for full-text review. The final assessment covered 19 trials within 13 nations with participants aged 51 to 78. Vitamin D supplementation from dietary and pharmaceutical sources significantly increased serum 25(OH)D to optimal levels. Lower baseline serum 25(OH)D, lighter skin color, longer treatment duration, and prolonged skin exposure were all associated with a better response to vitamin D supplementation in postmenopausal women.

Impact of Menopause and the Menstrual Cycle on Oxidative Stress in Japanese Women

Ayaka Ishikawa 1, Hiroshi Matsushita 1, Saki Shimizu 1, Noriko Morita 1, Rina Hanai 1, Saeko Sugiyama 1, et al.

Although estrogen possesses both pro- and anti-oxidant properties, its overall role in oxidative stress among women remains unclear, particularly since the influence of exogenously administered estrogen during previous studies differed by dose, administration route, and estrogen type. The aim of this study was to elucidate the effects of endogenous estrogen on oxidative stress in women. Thus, we performed a non-interventional observational study of healthy postmenopausal (n = 71) and premenopausal (n = 72) female volunteers. Serum levels of derivatives of reactive oxygen metabolites (d-ROMs, which are collectively a marker of oxidative stress), as well as the biological antioxidant potential (BAP, an indicator of antioxidant capacity), were compared between (1) pre- versus post-menopausal women, and (2) premenopausal women in early follicular versus mid-luteal phases of their menstrual cycles. We found that serum d-ROMs and BAP values in postmenopausal women were significantly higher than those in premenopausal women. Moreover, the d-ROM levels were significantly correlated with serum copper concentrations. However, neither d-ROMs nor BAP values were significantly affected by the menstrual cycle phase, although changes in d-

ROMs between the follicular and luteal phases were significantly correlated with copper concentration shifts. These data indicate that postmenopausal hypoestrogenism is associated with elevated oxidative stress, although regular fluctuations of estrogen levels during the menstrual cycle do not influence oxidative stress.

Roles of Estrogen, Estrogen Receptors, and Estrogen-Related Receptors in Skeletal Muscle: Regulation of Mitochondrial Function

Kenta Yoh 1, Kazuhiro Ikeda 1, Kuniko Horie 1, Satoshi Inoue 1 2

Estrogen is an essential sex steroid hormone that functions primarily in female reproductive system, as well as in a variety of tissues and organs with pleiotropic effects, such as in cardiovascular, nervous, immune, and musculoskeletal systems. Women with low estrogen, as exemplified by those in postmenopause, are therefore prone to suffer from various disorders, i.e., cardiovascular disease, dementia, metabolic syndrome, osteoporosis, sarcopenia, frailty, and so on. Estrogen regulates the expression of its target genes by binding to its cognate receptors, estrogen receptors (ERs) α and β. Notably, the estrogen-related receptors (ERRs) α, β, and γ are originally identified as orphan receptors that share substantial structural homology and common transcriptional targets with ERs. Accumulating evidence suggests that ERs and ERRs play crucial roles in skeletal muscles, such as muscle mass maintenance, muscle exercise physiology, and muscle regeneration. In this article, we review potential regulatory roles of ERs and ERRs in muscle physiology, particularly with regard to mitochondrial function and metabolism.

Long-Term Non-Cancer Risks in People with BRCA Mutations following Risk-Reducing Bilateral Salpingo-Oophorectomy and the Role of Hormone Replacement Therapy: A Review

Amanda S Nitschke 1, Helena Abreu do Valle 1, Lesa Dawson 1, Janice S Kwon 1, Gillian E Hanley 1

Risk-reducing bilateral salpingo-oophorectomy (RRBSO) is the gold standard preventative option for BRCA mutation carriers at high risk for ovarian and breast cancer. However, when performed at the recommended ages of 35-45 years, RRBSO induces immediate premature surgical menopause, along with the accompanying adverse psychosocial, cardiovascular, bone, and cognitive health consequences. While these health consequences have been thoroughly studied in the general population, little is known about the long-term health outcomes in the BRCA population. Hormone replacement therapy (HRT) until the average age of natural menopause can help mitigate these health risks, yet the initiation of HRT is a complex decision among BRCA carriers due to concern of increasing the already high risk of breast cancer in these people. This review summarizes the current research on long-term non-cancer risks in BRCA carriers following RRBSO-induced premature surgical menopause, and highlights the existing evidence in support of HRT use in this population.

Younger facial looks are associate with a lower likelihood of several age-related morbidities in the middle-aged to elderly

Selma Mekić 1, Luba M Pardo 1, David A Gunn 2, Leonie C Jacobs 1, Merel A Hamer 1, M Arfan Ikram 3, et al.

Background: Looking older for one's chronological age is associated with a higher mortality rate. Yet it remains unclear how perceived facial age relates to morbidity and the degree to which facial ageing reflects systemic ageing of the human body. Objectives: To investigate the association between ΔPA and age-related morbidities of different organ systems, where ΔPA represents the difference between perceived age (PA) and chronological age. Methods: We performed a cross-sectional analysis on data from the Rotterdam Study, a population-based cohort study in the Netherlands. High-resolution facial photographs of 2679 men and women aged 51.5-87.8 years of European descent were used to assess PA. PA was estimated and scored in 5-year categories using these photographs by a panel of men and women who were blinded for chronological age and medical history. A linear mixed model was used to generate the mean PAs. The difference between the mean PA and chronological age was calculated (ΔPA), where a higher (positive) ΔPA means that the person looks younger for their age and a lower (negative) ΔPA that the person looks older. ΔPA was tested as a continuous variable for association with ageing-related morbidities including cardiovascular, pulmonary, ophthalmological, neurocognitive, renal, skeletal and auditory morbidities in separate

regression analyses, adjusted for age and sex (model 1) and additionally for body mass index, smoking and sun exposure (model 2). Results: We observed 5-year higher ΔPA (i.e. looking younger by 5 years for one's age) to be associated with less osteoporosis [odds ratio (OR) 0.76, 95% confidence interval (CI) 0.62-0.93], less chronic obstructive pulmonary disease (OR 0.85, 95% CI 0.77-0.95), less age-related hearing loss (model 2; B = -0.76, 95% CI -1.35 to -0.17) and fewer cataracts (OR 0.84, 95% CI 0.73-0.97), but with better global cognitive functioning (g-factor; model 2; B = 0.07, 95% CI 0.04-0.10). Conclusions: PA is associated with multiple morbidities and better cognitive function, suggesting that systemic ageing and cognitive ageing are, to an extent, externally visible in the human face.

Effect of hysterectomy on ovarian function: a systematic review and meta-analysis

Yibao Huang # 1 2 3, Meng Wu # 1 2 3, Chuqing Wu 1 2 3, Qingqing Zhu 1 2 3, Tong Wu 1 2 3, Xiaoran Zhu, et al.

Background: Hysterectomy is one of the most frequently gynecologic surgeries performed in premenopausal women. Many premenopausal patients are unwilling to undergo hysterectomy due to the probable decreased ovarian function. The aim of this study is to determine the effect of hysterectomy on ovarian function. Methods: We mainly searched the Embase, PubMed and Web of Science databases for eligible studies. The outcomes were the levels of common indicators of ovarian function, such as anti-müllerian hormone (AMH), follicle stimulating hormone (FSH), inhibin B, estradiol (E2) and luteinizing hormone (LH). Results: The 14 included studies were conducted between 1989 and 2021, involving a total of 1,457 premenopausal women with 760 and 697 in the hysterectomy and control group, respectively. We found that hysterectomy damage ovarian function compared to the control group, with lower AMH level [Weighted mean difference (WMD) = -0.56, 95% confidence interval (95% CI): -0.72 to -0.39, P = 0.000], higher FSH levels (WMD = 2.96, 95% CI: 1.47 to 4.44, P = 0.000), lower inhibin B levels (WMD = -14.34, 95% CI: -24.69 to -3.99, P = 0.000) and higher LH levels (WMD = 4.07, 95% CI: 1.78 to 6.37, P = 0.000). In addition, E2 levels have a decreasing trend (WMD = -17.13, 95% CI: -35.10 to 0.85, P = 0.631) in the hysterectomy group but were not statistically significant. Conclusion: Hysterectomy has a negative impact on ovarian function, especially in female patients over 40 years old. So, the older patients should closely monitor their ovarian function for early diagnosis and treatment of menopausal symptoms.

A comprehensive assessment of age at menopause with well-characterized cognition at 70 years: A population-based British birth cohort

Louisa P Needham 1, Kirsty Lu 2, Jennifer M Nicholas 3, Jonathan M Schott 4, Marcus Richards, Sarah-Naomi James

Objectives: Associations between age at menopause and cognition post-menopause are examined to determine whether relationships are stronger for certain cognitive domains. Study design: Women from the Medical Research Council National Survey of Health and Development and its neuroscience sub-study, Insight 46, were included if they had known age at menopause (self-reported via questionnaire) and complete cognitive outcome data at age 69 (n = 746) or at Insight 46 wave I (n = 197). Multivariable linear regression analyses adjusting for life course confounders were run; interactions with menopause type (natural/surgical) and APOE-ε4 status were examined; and the potential contribution of hormone therapy was assessed. Main outcome measures: Cognitive measures were standardized Addenbrooke's Cognitive Examination - third edition total and sub-domain scores at age 69 (whole cohort) and Preclinical Alzheimer's Cognitive Composite total and sub-test scores at age ~70 (Insight 46). Results: Older age at menopause was associated with better performance across all outcomes, most strongly for the Addenbrooke's Cognitive Examination memory and visuospatial function sub-domains, and the Preclinical Alzheimer's Cognitive Composite digit-symbol substitution test and face-name associative memory examination sub-tests. Adjusting for early-life factors attenuated all effect estimates, driven by childhood cognition, and accounting for menopause type revealed negative confounding for some outcomes. No significant interactions with menopause type or APOE-ε4 status were detected. Further adjustment for hormone therapy did not meaningfully alter the estimated effects. Conclusions: Older age at menopause is associated with better later-life cognitive performance, particularly for visual processing and associative learning and memory domains. Childhood cognition was an important contributor.