

Selección de Resúmenes de Menopausia

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María Soledad Vallejo. Obstetricia Ginecología. Hospital Clínico. Universidad de Chile

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Osteoporosis in postmenopausal women is associated with disturbances in gut microbiota and migration of peripheral immune cells

Zongjun Ma # 1, Yuanyuan Liu # 2, Wenke Shen 2, Jiaxiao Yang 2, Ting Wang 2, Yiwei Li 2, Junbai Ma 2, et al.

Background: Postmenopausal osteoporosis (PMO) results from a reduction in bone mass and microarchitectural deterioration in bone tissue due to estrogen deficiency, which may increase the incidence of fragility fractures. In recent years, the "gut-immune response-bone" axis has been proposed as a novel potential approach in the prevention and treatment of PMO. Studies on ovariectomized murine model indicated the reciprocal role of Th17 cells and Treg cells in the aetiology of osteoporosis. However, the relationship among gut microbiota, immune cells and bone metabolic indexes remains unknown in PMO. **Methods:** A total of 77 postmenopausal women were recruited for the study and divided into control (n = 30), osteopenia (n = 19), and osteoporosis (n = 28) groups based on their T score. The frequency of Treg and Th17 cells in lymphocytes were analyzed by flow cytometry. The serum levels of interleukin (IL)-10, 17 A, 1 β , 6, tumor necrosis factor (TNF)- α , and lipopolysaccharide (LPS) were determined via enzyme-linked immunosorbent assay. Additionally, 16S rRNA gene V3-V4 region sequencing analysis was performed to investigate the gut microbiota of the participants. **Results:** The results demonstrated decreased bacterial richness and diversified intestinal composition in PMO. In addition, significant differences of relative abundance of the gut microbial community in phylum and genus levels were found, mainly including increased Bacteroidota, Proteobacteria, and Campylobacterota, as well as reduced Firmicutes, Butyricoccus, and Faecalibacterium. Intriguingly, in the osteoporosis group, the concentration of Treg cells and associated IL-10 in peripheral circulation was negatively regulated, while other chronic systemic proinflammatory cytokines and Th17 cells showed opposite trends. Moreover, significantly elevated plasma lipopolysaccharide (LPS) in patients with osteoporosis indicated that disrupted intestinal integrity and permeability. A correlation analysis showed close relationships between gut bacteria and inflammation. **Conclusions:** Collectively, these observations will lead to a better understanding of the relationship among bone homeostasis, the microbiota, and circulating immune cells in PMO. The elevated LPS levels of osteoporosis patients which not only indicate a breach in intestinal integrity but also suggest a novel biomarker for assessing osteoporosis risk linked to gut health.

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Association between serum estradiol levels and abdominal aortic calcification in postmenopausal woman: a cross-sectional study

Lan He # 1 2, Xu Li # 1, E Shen 2, Yong-Ming He 1

Background: The association between Estradiol (E2) levels and abdominal aortic calcification (AAC) in postmenopausal women remains unclear. **Methods:** 614 postmenopausal women from the 2013-2014 NHANES survey cycle were included in this study. The study population was divided into 3 groups according to E2 tertiles: Tertile1 (2.12-3.57pg/mL), Tertile2 (3.60-7.04pg/mL), and Tertile3 (7.06-38.4pg/mL). Estrogen concentration data were natural logarithmically transformed. A Kauppila score > 5 was regarded as prominent arterial calcification and was used to define (EAAC). Logistic regression models were used to assess the association between E2 levels and EAAC prevalence. Subgroup analyses were performed to test whether the association between E2 levels and EAAC prevalence was consistent in different groups. Sensitivity analyses tested the stability of the model in women older than 45 years. **Results:** EAAC prevalence was significantly higher in Tertile1 (16.6%) than in Tertile2 (9.8%) and Tertile3 (8.3%). On a continuous scale, the adjusted model showed a 58% [OR (95%CI), 1.58 (1.02, 2.54)] increase in the risk of EAAC prevalence for per unit decrease in ln(E2). On a categorical scale, the adjusted model showed that Tertile1 and Tertile2 were 2.55 [OR (95%CI), 2.55 (1.10, 5.92)] and 1.31[OR (95%CI), 1.31(1.03, 2.57)] times higher risk of suffering from EAAC than Tertile3, respectively.

Conclusion: This study found that a higher prevalence of AAC in postmenopausal women is closely associated with lower serum E2 levels. Our research further underscores the importance of E2 in maintaining cardiovascular health in postmenopausal women and suggests that monitoring E2 levels may aid in the early prevention and management of AAC and related cardiovascular diseases.

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The role of menopausal symptoms on future health and longevity: A systematic scoping review of longitudinal evidence

Robin Andrews 1, Arron Lacey 2, Kate Bache 3, Emma J Kidd 4

Women live longer than men but spend more years in poor health. Menopausal symptoms are not generally associated with adverse health outcomes. However, increasingly, evidence suggests they can significantly impact future health and longevity. Understanding the long-term effects of menopausal symptoms will enable clinicians to identify risk factors and intervene with modifications to support healthy aging. This review examined the scope of research investigating the association between menopausal symptoms and future health outcomes. We searched for longitudinal cohort studies. Date and geographical restrictions were not applied. Articles were screened and data extracted using standardised methods. Included studies examined the role of menopausal symptoms on future health developments using a sample who had experienced menopause and were deemed healthy at baseline, with clear reporting of their menopausal status at symptom assessment. We identified 53 eligible studies with data from over 450,000 women enrolled in 28 longitudinal cohorts. Cardiovascular disease, psychiatric disorders, diabetes, and reduced bone mineral density were positively associated with menopausal symptoms. Breast cancer was associated with an asymptomatic menopause. Psychological menopausal symptoms and cognitive decline improved after menopause, except among women from low socioeconomic backgrounds. These findings demonstrate that menopausal symptoms are important indicators for future health risks. Future work should investigate the impact of underexplored menopausal symptoms on future health, such as sleeping problems and urogenital issues, and evaluate whether treating menopausal symptoms could lead to improvements in future health outcomes. Should future research continue to support these findings, clinical guidelines should be updated to support clinical decision-making in menopause care.

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Menopause and endometriosis

Chiara Cassani, Sara Tedeschi, Laura Cucinella, Vittoria Morteo, Cristina Angela Camnasio, Lara Tiranini, et al.

The shift in paradigm from the belief that endometriosis exclusively affects women of reproductive age has brought attention to its manifestation in postmenopausal patients. Despite this emerging awareness, there remains a dearth of information in the literature regarding postmenopausal endometriosis, with uncertainties surrounding its prevalence, clinical significance, optimal management strategies, and prognosis. Clinical manifestations of endometriosis in menopausal patients lack specificity, with pain onset possible at any stage of life. The primary approach for symptomatic postmenopausal endometriosis continues to be surgical excision, serving both diagnostic and therapeutic purposes while mitigating the risk of coexisting malignancies. Managing the disease in postmenopausal women presents challenges due to possible contraindications for menopausal hormone therapy and the elevated risk of recurrence and malignant transformation. However, conclusive data regarding the appropriateness of menopausal hormone therapy in women with endometriosis or a history of the disease are lacking. Current recommendations lean towards prioritizing combined menopausal hormone therapy formulations or tibolone over estrogen-only therapies due to their potentially higher malignancy risk. The possible increased risk of osteoporosis and cardiovascular disease in postmenopausal women with endometriosis is likely linked to a history of surgical menopause at an earlier age, but more research is warranted. This narrative review summarizes the available literature and provides insights into the intricate connection between endometriosis and menopause, shedding light on pathogenesis, symptoms, oncologic risk, diagnosis, and treatment.

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Epidemiology and clinical outcomes of vasomotor symptoms among perimenopausal women and women aged 65 years or older in the US: a systematic review

Carolyn J Gibson 1, Mayank Ajmera 2, Fiona O'Sullivan 3, Aki Shiozawa 2, Greta Lozano-Ortega 3, et al.

Vasomotor symptoms (VMS) are the hallmark of menopause and negatively affect a large proportion of women over many years. However, studies evaluating the overall impact of VMS are limited. This systematic review (SR) aimed to examine epidemiological, clinical, humanistic, and economic outcomes of VMS among perimenopausal women and among women aged ≥ 65 years in the US. A systematic search of the MEDLINE and Embase databases was conducted to identify observational studies (2010-2022) reporting on these populations. Data reporting outcomes of interest were extracted and analyzed descriptively. Of 7,613 studies identified, 34 met inclusion criteria, of which 30 reported on perimenopausal women and 4 reported on VMS in women aged ≥ 65 years. VMS and severe/moderate-to-severe VMS were reported by 48.4-70.6 percent and 13.0-63.1 percent, respectively, of perimenopausal women. Mean VMS duration was 2.6 years, and median duration ranged from 7.4 to 10.1 years among women with onset in early perimenopause and from 3.8 to 6.1 years among those with onset in late perimenopause. Among women aged ≥ 65 years, 20.9-45.1 percent reported VMS; 2.0 percent reported severe symptoms, and 17.6 percent reported moderate symptoms. No studies reported VMS frequency and duration or the economic or humanistic burden among women aged ≥ 65 years. In conclusion, high VMS frequency and severity were observed among perimenopausal women and women aged ≥ 65 years in the US in this SR, highlighting the need for (1) better management of VMS to reduce frequency and severity and (2) further research to clarify the impact of VMS on disease burden, quality of life, and economic impact.

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Menopausal state and rheumatoid arthritis: a systematic review and meta-analysis

Negin Namavari 1, Mohammad Jokar 2, Arnoosh Ghodsian 3, Hossein Kargar Jahromi 4, Vahid Rahmanian 5

Background: Rheumatoid arthritis (RA) is a chronic inflammatory condition primarily affecting the joints. The higher prevalence of RA among females, combined with the known effects of sex hormones on immune function, has led researchers to investigate the potential relationship between menopausal status and the risk, severity, or progression of RA. This systematic review and meta-analysis aimed to determine the association between menopause and rheumatoid arthritis. Methods: In 2023, we conducted a comprehensive search across multiple databases, including Google Scholar, Scopus, PubMed/MEDLINE, Science Direct, Web of Science, EMBASE, Springer, and ProQuest. The search aimed to identify studies exploring the association between menopause and rheumatoid arthritis. Results: Our analysis revealed that post-menopausal women had a higher risk of developing rheumatoid arthritis compared to pre-menopausal women, with an estimated odds ratio of 1.35 (95% CI: 1.04-1.67). Additionally, women who experienced early menopause (defined as onset before age 45) showed significantly higher odds of developing RA, with an odds ratio of 2.97 (95% CI: 1.73-4.22). Conclusion: These findings highlight the importance of considering menopausal status when assessing the risk of RA development in women. The results suggest that post-menopausal women, particularly those who experience early menopause, may be at higher risk for developing RA. Further research in this area could provide valuable insights into potential preventive measures and targeted interventions for high-risk individuals.