Selección de Resúmenes de Menopausia

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Exosomes from adipose-derived stem cells alleviate premature ovarian failure via blockage of autophagy and AMPK/mTOR pathway

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Objective: The objective of this study was to investigate the effects and mechanisms of adipose-derived stem cell-derived exosome (ADSCs-Exo) in treating premature ovarian failure (POF). Methods: We constructed a POF mouse model through intraperitoneal injection of cyclophosphamide, followed by the administration of the autophagy inhibitor 3-methyladenine (3-MA). Pathological injury, follicle stimulating hormone (FSH), malondialdehyde (MDA), reactive oxygen species (ROS), estradiol (E2), superoxide dismutase (SOD), granulosa cell (GC) apoptosis, and autophagy were assessed. Exosomes isolated from ADSCs were used to treat POF in mice. The AMPK-mTOR pathway and its proteins (p-AMPK and p-mTOR) were evaluated. A POF cell model was established using cyclophosphamide-treated human ovarian granulosa-like tumor (KGN) cells. We administered ADSCs-Exo and rapamycin to validate the mechanism of ADSCs-Exo against POF. Results: In POF mice, 3-MA treatment attenuated pathological injuries, decreased FSH, MDA, and ROS levels, and increased E2 and SOD levels. 3-MA treatment also inhibited GC apoptosis and autophagy. ADSCs-Exo alleviated pathological injuries, improved ovarian morphology and function, and reduced oxidative stress in POF mice. ADSCs-Exo inhibited GC apoptosis and autophagy. ADSCs-Exo downregulated the expression of AMPK/mTOR pathway proteins (p-AMPK and p-mTOR). In the POF cell model, ADSCs-Exo and rapamycin inhibited AMPK/mTOR-mediated autophagy. Conclusion: ADSCs-Exo inhibits POF through the inhibition of autophagy and the AMPK/mTOR pathway. This study provides a potential target for the clinical treatment of POF.

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The impact of labiaplasty on sexuality

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Objectives: Hypertrophy of the labia minora and majora, or a prominent clitoral hood, are the primary reasons why women, particularly those seeking cosmetic gynecologists, may experience limitations in their social environments. At the same time, modern trends have made labiaplasty popular in recent years. This study investigated the effect of labiaplasty on women's genital self-perception and sexual functions. Material and methods: The composite reduction labiaplasty technique was performed on 33 women aged 18-50 with Grades 2-4 labia minora hypertrophy. The exclusion criteria included menopausal and sexually inactive women, as well as women with vulvar disorders, a history of vaginal or labial surgery, other gynecological disorders, psychological disorders, and malignancies. The Female Sexual Function Index (FSFI) and Female Genital Self-Image Scale (FGSIS) questionnaires were administered to the study subjects before and three months after their surgery, during their follow-up appointments. Results: The mean age of the subjects was 30.73 ± 3.94 years. Their mean parity was 1.12 ± 0.82. Almost 70% of them had a university degree. Their most common reason for desiring labiaplasty was aesthetic concerns (48.48%). Their total FGSIS scores were 11.85 ± 1.35 preoperatively and 24.48 ± 1.66 postoperatively, and their total FSFI scores were 13.29 ± 1.68 preoperatively and 24.48 ± 1.66 postoperatively. Conclusions: Labiaplasty surgery is a safe surgical procedure. It has a positive effect on women's genital self-image and sexual functions.

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Potential application of anti-osteoporotic therapy to relieve sarcopenia in the elderly

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Sarcopenia is a progressive and systemic skeletal muscle disorder associated with aging that usually occurs with age in the elderly. Sarcopenia currently lacks effective pharmacological treatment modalities. Multiple pharmacological intervention modalities are available for osteoporosis, a comprehensive disease characterized by decreased systemic

bone mass, degradation of bone microarchitecture, and increased bone fragility. Several recent studies have shown an extremely strong correlation between sarcopenia and osteoporosis, leading to the concept of "osteosarcopenia". Therefore, it is possible to alleviate sarcopenia simultaneously by improving osteoporosis.

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Research Progress on the Etiology and Treatment of Premature Ovarian Insufficiency

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Background: Menopause in women marks the knot of reproductive life, and menopause is defined as the last menstrual period in a woman, but this is caused by the failure of the ovarian reserve. The average age of natural menopause in the general population of women has remained around 50-52 years. Premature ovarian insufficiency (POI) is a debilitating clinical syndrome that manifests as a decline in ovarian function in women under 40. This condition is a prominent cause of female infertility. Summary: POI is a debilitating condition that not only wreaks havoc on patients' physical and mental well-being but also imposes substantial mental, psychological, and economic burdens, particularly on women. In addition to diminished fertility, individuals afflicted with POI face an elevated risk of developing debilitating conditions such as osteoporosis and cardiovascular disease. The etiologies of POI are highly heterogeneous, and it can be caused by spontaneous genetic defects or induced by autoimmune diseases, infections, and iatrogenic or environmental factors. Alarmingly, idiopathic POI, a subtype characterized by an unknown etiology, accounts for more than half of all POI cases. Currently, clinical interventions for POI primarily consist of hormone replacement therapy. Fertility preservation methods are cryopreservation of embryos, oocytes, and ovarian tissue. Immunological interventions, gene editing techniques, and stem cell-based therapies are being explored to unravel the diverse etiologies and underlying mechanisms of POI, thereby enabling the identification of optimal therapeutic interventions. These innovative approaches offer unprecedented opportunities to advance the field of reproductive medicine. Key messages: The main aim of this paper was to offer a succinct summary of the latest research breakthroughs concerning the elucidation of the mechanisms governing the origin and management of POI.

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Menopausal hormone therapy and risk for dementia in women with CKD: A nationwide observational cohort study

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Aim: The risk for dementia is increased in postmenopausal women. The incidences of premature menopause and dementia have increased in patients with chronic kidney disease (CKD). The potential benefits of hormone replacement therapy (HRT) on cognitive function may be a more critical issue for patients with CKD. Methods: Women aged >40 years with or without HRT were identified using the 2009 National Health Screening Questionnaire. Women who were newly diagnosed with CKD between 2009 and 2013 were enrolled. HRT was used as an exposure variable, and participants were followed from the day CKD was diagnosed to December 2019. The hazard ratio (HR) for dementia was evaluated using Cox proportional hazards regression analysis.Results: We included 755 426 postmenopausal women with CKD. The median follow-up period was 7.3 (IQR, 5.8-8.7) years. All-cause dementia, Alzheimer's disease, and vascular dementia occurred in 107 848 (14.3%), 87 833 (11.6%), and 10 245 (1.4%) women, respectively. HRT was significantly associated with a lower risk for dementia in the adjusted Cox regression model (all-cause dementia: HR 0.80; 95% confidence interval [CI] 0.78-0.82; $p < 0.001$; Alzheimer's disease: HR 0.80; 95% CI 0.77-0.82; $p < 0.001$; vascular dementia: HR 0.80; 95% CI 0.74-0.87; $p < 0.001$). Conclusions: HRT was significantly associated with a lower risk for CKD-related cognitive dysfunction in postmenopausal women. Prospective studies are needed to determine whether HRT lowers the risk for dementia in menopausal women with CKD.

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Associations of the serum vitamin D with mortality in postmenopausal women

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Purpose: Current evidence on the association of serum vitamin D with mortality in postmenopausal women is limited and inconsistent. Therefore, the purpose of this study was to examine the relationship between serum vitamin D and

mortality in postmenopausal women. Methods: In this study, we used data from the NHANES (2001-2018) and conducted a multivariate Cox regression model to examine associations between serum vitamin D and all-cause mortality, cardiovascular mortality (CVD), and cancer mortality. Results: In a median follow-up period of 8.3 years, 1905 deaths of all causes were reported, 601 were due to CVD, and 385 deaths were due to cancer. After multivariable adjustment, higher serum vitamin D levels were significantly associated with a reduced risk of death. Compared to participants with lower vitamin D levels (<25 nmol/L), those with higher vitamin D levels (≥75.0 nmol/L) had a lower risk of all-cause mortality (hazard ratio 0.60, 95 % confidence interval 0.49 to 0.74), a lower risk of cardiovascular mortality (0.51, 0.35 to 0.74), and a lower risk of cancer mortality (0.43, 0.28 to 0.67). Moreover, we observed an L-shaped dose-response relationship of serum vitamin D levels with all-cause mortality, and cancer mortality, with this inflexion point being 55.9 nmol/L, and 51.2 nmol/L, respectively. Conclusions: Higher concentrations of serum vitamin D substantially correlated with a reduction in mortality risk from all-cause, CVD, and cancer in postmenopausal women. These results imply that upholding adequate vitamin D levels may help prevent premature death in postmenopausal women.

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Osteoporosis and Fracture Risk Following Benign Hysterectomy Among Female Patients in Korea

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Importance: Prior research about the association between hysterectomy and osteoporosis risk had limitations.
Objective: To assess osteoporosis and fracture risk among female patients who underwent hysterectomy due to benign conditions. Design, setting, and participants: In this retrospective cohort study, female patients aged 40 to 59 years with benign hysterectomy between 2003 and 2011 were selected from Korean National Health Insurance Data and matched by 1:1 propensity score with female patients who had health checkups and indicated that they had not had a hysterectomy. A Cox proportional hazard model was used to analyze osteoporosis and fracture risk, with participants monitored until December 31, 2020. Data analysis was performed from July 16, 2022, to January 12, 2023.Exposures: Hysterectomy with or without adnexal surgical procedure. Main outcomes and measures: The primary outcome was the risk of osteoporosis. Secondary outcomes included the risk of vertebral fracture, hip fracture, other fractures, and total fracture. Results: The study population included 25 910 patients; the median (IQR) age was 47 (44-50) years, and median (IQR) follow-up period was 10.9 (9.4-12.7) years. In the stratified-extended Cox proportional analysis, female patients who underwent hysterectomy without an adnexal surgical procedure were associated with a higher risk of osteoporosis within 7 years compared with female patients who did not undergo hysterectomy (hazard ratio [HR], 1.28 [95% CI, 1.19-1.37]); the analysis was divided into 7 years due to a violation of the Cox assumption, and the risk did not differ after 7 years (HR, 0.99 [95% CI, 0.93-1.06]). However, the hysterectomy group with an adnexal surgical procedure had an association with higher risk of osteoporosis compared with the nonhysterectomy group both within 7 years of study entry (HR, 1.56 [95% CI, 1.33-1.82]) and after 7 years (HR, 1.20 [95% CI, 1.04-1.40]). In the hysterectomy group without an adnexal surgical procedure, the risks of vertebral fracture, hip fracture, and total fracture were similar to those in the nonhysterectomy group. Similar trends were observed in the hysterectomy group with an adnexal surgical procedure. Conclusions and relevance: Hysterectomy without an adnexal surgical procedure was associated with an increased osteoporosis risk within 7 years, but not afterwards, compared with the nonhysterectomy group. Hysterectomy was not associated with vertebral and hip fractures.

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Sugar-sweetened beverage consumption and breast cancer in pre- and post-menopausal women

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Background: The consumption of sugar-sweetened beverages (SSBs), of which Mexico is a large consumer, has been associated with the risk of breast cancer. We assessed the association between SSBs consumption and breast cancer risk in pre- and postmenopausal women. Methods: We performed a multicenter population-based case-control study in Mexico City, Monterrey, and Veracruz. We recruited 1,000 cases and 1,074 controls; all participants were pre- or postmenopausal women between 35 and 69 years of age. Diet before symptoms onset was assessed using a food frequency questionnaire. We conducted a multivariable-adjusted conditional logistic regression analysis stratified by menopausal status. Results: For premenopausal women, after adjusting for matching characteristics, total energy intake

and all potential confounders, the odds of having breast cancer in women who drank one or more SSBs servings per day showed 1.78 times the odds of those who drank one or fewer SSBs servings per month (OR=1.78, 95% CI 1.06-3.01). For postmenopausal women, the corresponding model was not statistically significant (OR=1.38, 95% CI 0.84-2.25). We also observed higher consumption of SSBs among pre- than in postmenopausal women (23.3% and 17.4%, respectively among controls in the highest consumption category (≥ 1 per day). Conclusions: Our results suggest that SSBs consumption increases the risk of developing breast cancer, particularly in premenopausal women. Impact: Given the consumption of SSBs, of which Mexico is a large consumer, these results can support public policies to discourage the consumption of SSBs.