The Hidden Source of Testosterone Hypersecretion in a Female-A 30-Year Journey
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A Sertoli-Leydig cell tumor (SLCT) is a rare ovarian tumor that often excessively secretes testosterone and its precursor, leading to virilization in females. We present a case of a female patient with persistent, severe hyperandrogenism. Our patient had a history of left oophorectomy due to an ectopic pregnancy and initially presented with amenorrhea at the age of 30. Biochemical evaluations suggested ovarian hyperandrogenism. Despite the absence of an ovarian mass, she underwent a right oophorectomy and remained hyperandrogenic postoperatively. When she established care with our endocrinology clinic at the age of 58, she had more virilizing features and total testosterone levels ranging from 10.1 to 12.0 nmol/L (292-346 ng/dL; normal reference range for women: 0.07-1.56 nmol/L; 2-45 ng/dL). While biochemical evaluations were consistent with tumorous ovarian hyperandrogenism, ultrasound and computed tomography again failed to identify the source. Finally, an 18F-fluorodeoxyglucose-positron emission tomography/computed tomography revealed a mass in the left adnexa, and she underwent removal of the mass. The final pathology confirmed SLCT. The case highlights that SLCT may be small and slow-growing and not readily visible on conventional imaging modalities.

Role of Platelet-Rich Plasma in Genitourinary Syndrome of Menopause
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The genitourinary syndrome of menopause (GSM) encompasses a range of symptoms linked to the genitourinary tract stemming from the reduction in estrogen levels following menopause. These symptoms may endure throughout a woman's lifetime. Platelet-rich plasma (PRP), known for its capacity to induce angiogenesis and the restoration effects of growth factors, has been widely employed in various disorders, including GSM. This article aims to comprehensively review the existing literature on the utilization of PRP for managing GSM. The search was executed in electronic databases, specifically PubMed, Scopus, and Google Scholar, up until April 2023. Eligible studies were meticulously chosen for inclusion in this systematic review. PRP emerges as a viable alternative for addressing vaginal atrophy, exhibiting favorable outcomes. Notably, it can be considered for patients with contraindications to hormonal therapy. However, the available body of evidence supporting the use of PRP for GSM remains limited. PRP presents itself as a promising agent, offering a patient-friendly, cost-effective alternative modality. To establish the efficacy of PRP in treating GSM definitively, future randomized trials are imperative.

Menopause hormone therapy and physical performance: The Canadian Longitudinal Study on Aging
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Objective: To examine the association between menopause hormone therapy (MHT) and physical performance among women from the Canadian Longitudinal Study on Aging. Study design: Cross-sectional study of 12,506 postmenopausal Canadian women. Main outcome measures: Grip strength (kg), gait speed (m/s), timed up and go (s), chair rise (s), and balance (s) were assessed following standard procedures. The association between MHT and physical performance was evaluated using linear regression models adjusted for age, education, study site, smoking, alcohol consumption, body mass index, diabetes, hypertension, and hysterectomy. Sensitivity analyses were conducted according to age at study visit (<65 vs. ≥65 years), body mass index (<25 kg/m² vs. ≥25 kg/m²), physical activity level (less vs. more active), duration and type of MHT, and time of starting MHT after menopause. Results: Compared with those who never used MHT, prior or current use was associated with better performance on the timed up and go test (β: -0.19; 95%CI: -0.28; -0.11) and faster gait speed (β = 0.01, 95%CI = 0.00; 0.02). No association was found for grip

strength, balance, and chair rise. Results did not change by body mass index, physical activity, or duration of MHT use. When stratified by age at study visit, the effect remained significant only in among those aged 65 years or more. Starting MHT <5 years after menopause was associated with better physical performance. Conclusions: MHT was associated with better physical performance in gait speed and timed up and go tests. The cross-sectional design of the study limits causal interpretation. Prospective studies are needed to confirm our results.


**Health benefits of combined oral contraceptives - a narrative review**

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Purpose: This review presents an update of the non-contraceptive health benefits of the combined oral contraceptive pill. Methods: We conducted a literature search for (review) articles that discussed the health benefits of combined oral contraceptives (COCs), in the period from 1980 to 2023. Results: We identified 21 subjective and/or objective health benefits of COCs related to (i) the reproductive tract, (ii) non-gynaecological benign disorders and (iii) malignancies. Reproductive tract benefits are related to menstrual bleeding(including anaemia and toxic shock syndrome), dysmenorrhoea, migraine, premenstrual syndrome (PMS), ovarian cysts, Polycystic Ovary Syndrome (PCOS), androgen related symptoms, ectopic pregnancy, hypoestrogenism, endometriosis and adenomyosis, uterine fibroids and pelvic inflammatory disease (PID). Non-gynaecological benefits are related to benign breast disease, osteoporosis, rheumatoid arthritis, multiple sclerosis, asthma and porphyria. Health benefits of COCs related to cancer are lower risks of endometrial cancer, ovarian cancer and colorectal cancer. Conclusions: The use of combined oral contraceptives is accompanied with a range of health benefits, to be balanced against its side-effects and risks. Several health benefits of COCs are a reason for non-contraceptive COC prescription.


**Female sexuality across the menopausal age group: A cross sectional study**

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Background: Female sexual dysfunction (FSD) is an important health issue and its relationship with menopausal symptoms needs special attention. Objective: To identify the frequency of FSD in middle aged women and assess its relationship with obesity and menopausal symptoms.Methods: This was a cross sectional study performed at a tertiary care centre in North India over a period of one year from June 2022 to May 2023. Sexually active women aged 40-55 years were included in the study sample. Exclusion criteria included those not willing to participate, having pregnancy, malignancy, mental illness or history of pelvic surgery. Baseline demographic and anthropometric details were noted. Sexual function and menopausal symptoms were assessed using Menopause Rating Scale (MRS) and Female Sexual Function Index Scale (FSFI) questionnaire respectively. Results: Among one hundred and forty three sexually active middle aged women, 43 women had FSD (30.06%). FSD was observed in 9.09%, 22.73% and 45.45% in 30-40 years, 46-50 years and 51-55 years respectively. No significant difference was seen in desire (p value=0.281), arousal (p value=0.424), lubrication (p value=0.143), orgasm (p value=0.637), satisfaction (p value=0.675), pain (p value=0.833), total score (p value=0.601) between body mass index (kg/m²). A significant strong negative correlation of somatic, urogenital, psychological and total MRS scores with female sexuality domains was observed excepting non-significant mild negative correlation between somatic with pain and psychological with orgasm and pain. Conclusion: Female sexual dysfunction are quite common and has negative correlation with menopausal symptoms. Health care providers need to focus on this issue as part of their routine assessment for better quality of life.


**Pro-vegetarian dietary pattern and risk of breast cancer: a case-control study**


Background: There are a few conflicting results from studies assessing the association between plant-based diets, particularly pro-vegetarian dietary pattern (PDP), and breast cancer (BC) incidence. Therefore, this study aimed to investigate the association between PDP and BC odds in the Iranian population. Methods: This case-control study was conducted on 134 women with BC and 265 without cancer (control). Participants were selected from two referral hospitals in Tehran, Iran. Also, a validated food frequency questionnaire was used to collect food information. Logistic regression was used to assess the association between PDP and BC and the association between PDP and BC by menopausal status. Results: It was observed that in two models of logistic regression, the chance of BC was lower in
the second and last tertile (T) than in the first tertile of PDP (model 1-T2: odds ratio (OR) = 0.39; 95% confidence interval (CI): 0.23-0.67; P = 0.001, and T3: OR = 0.43; 95% CI: 0.26-0.73; P = 0.002-model 2: T2: OR = 0.42; 95% CI: 0.24-0.74; P = 0.003, and T3: OR = 0.49; 95% CI: 0.27-0.88; P = 0.017). Also, according to menopausal status, the odds of developing BC in post-menopausal women in the second and last tertile of PDP was significantly lower than the first tertile in both logistic regression models. Conclusions: The findings revealed that Iranian women who followed PDP had a lower chance of developing BC. Also, we found that a diet high in plant-based foods and low in animal products is beneficial for reducing BC odds, particularly for post-menopausal women.


Fat as a Friend or Foe of the Bone
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Purpose of review: The objective of this review is to summarize the literature on the prevalence and diagnosis of obesity and its metabolic profile, including bone metabolism, focusing on the main inflammatory and turnover bone mediators that better characterize metabolically healthy obesity phenotype, and to summarize the therapeutic interventions for obesity with their effects on bone health. Recent findings: Osteoporosis and fracture risk not only increase with age and menopause but also with metabolic diseases, such as diabetes mellitus. Thus, patients with high BMI may have a higher bone fragility and fracture risk. However, some obese individuals with healthy metabolic profiles seem to be less at risk of bone fracture. Obesity has become an alarming disease with growing prevalence and multiple metabolic comorbidities, resulting in a significant burden on healthcare and increased mortality. The imbalance between increased food ingestion and decreased energy expenditure leads to pathological adipose tissue distribution and function, with increased secretion of proinflammatory markers and harmful consequences for body tissues, including bone tissue. However, some obese individuals seem to have a healthy metabolic profile and may not develop cardiometabolic disease during their lives. This healthy metabolic profile also benefits bone turnover and is associated with lower fracture risk.


Hormone replacement therapy and breast cancer incidence in Korean women
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Objectives: After the 2002 Women's Health Initiative (WHI) study, the global use of menopausal hormone therapy (MHT) declined, and despite subsequent studies indicating a low risk of breast cancer, concerns about MHT usage persist. We examined the relationship between changes in MHT use and changes in the incidence of breast cancer from 2002 to 2020 in South Korea. Study design: This study used tumor registry information from 2002 to 2020 from the Korean Statistical Information Service and analyzed the incidence rate of invasive breast cancer in women, who were divided into two age groups: <50 and ≥50 years. The numbers of MHT prescriptions in Korea between 2002 and 2020 was determined from pharmacy data. Results: The incidence of breast cancer per 100,000 women in South Korea increased from 34.3 in 2002 to 96.4 in 2020. Breast cancer incidence rates increased annually in both groups of women (those aged under and over 50 years), with no significant difference between the two (p = 0.614). Prescriptions for estrogen therapy (ET) in 2020 were 52.7% lower than those in 2002. Prescriptions for estrogen-progesterone therapy (EPT) decreased by 27.9% over the same period. Conversely, tibolone prescriptions, which had initially decreased by 25.4% in 2004, subsequently showed a steady increase and were 93.6% higher in 2020 than in 2002. Conclusion: The incidence of breast cancer increased annually in Korean women of all ages; however, the use of ET and EPT for MHT has declined since 2002, particularly the use of EPT after 2010. MHT, especially EPT, did not significantly increase the incidence of breast cancer in Korean women.