Selección de Resúmenes de Menopausia

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Are Endogenous Androgens Linked to Female Sexual Function? A Systemic Review and Meta-Analysis

Background: The benefits of treatment with testosterone (T) in women with loss of desire suggest that low androgens may distinguish women with sexual dysfunction (SD) from others; however, evidence on this point is lacking. Aim: To answer the question: is there an association between endogenous levels of androgens and sexual function in women? Methods: An extensive search was performed in MEDLINE, Embase and PsycInfo. Four separate meta-analyses were conducted for total T, free T, Free Androgen Index (FAI), and Dehydroepiandrosterone sulphate (DHEAS). Cohort, cross-sectional, and prospective studies were included. Outcomes: The main outcome was the association between endogenous androgens and sexual desire. Global sexual function was considered as a secondary outcome. The effect measure was expressed as standardized mean difference (SMD). Results: The meta-analysis on total T included 34 studies involving 3,268 women, mean age 36.5 years. In 11 studies, a significant association was found between sexual desire, measured by validated psychometric instruments, and total T (SMD = 0.59 [0.29;0.88], P < 0.0001), with a moderate effect. The association with global sexual function (n = 12 studies) was also significant (SMD = 0.44 [0.21;0.67], P <0.0001). Overall, total T was associated with a better sexual function (SMD = 0.55 [0.28;0.82)], P < 0.0001), with similar results obtained when poor quality studies were removed. Age showed a negative relationship with the overall outcome. No differences were found when stratifying the studies according to menopausal status, type of menopause, age at menopause, use of hormonal replacement therapy, relationship status, method for T measurement, phase of the menstrual cycle or use of hormonal contraception. The meta-analysis of T derivatives (free T and FAI) also showed a significant, moderate association with sexual desire. In contrast, DHEAS seems not to exert any significant influence on desire, whilst showing a positive association with global sexual function. Clinical implications: Endogenous androgens show a moderate association with a better sexual function in women; however, the role of psychological, relational and other hormonal factors should not be overlooked. Strengths & limitations: This represents the first attempt at meta-analyzing data available on the topic. A significant publication bias was found for total T. Conclusion: There appears to be a moderate association between total T and sexual desire/global sexual function, which is confirmed, although weak, in studies employing liquid chromatography-mass spectrometry (LC-MS). Similar results on desire were obtained for free T and FAI. DHEAS only showed a positive association with global sexual function. More research is needed.

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Morbidity and mortality in PCOS: A prospective follow-up up to a mean age above 80 years

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Objective: Despite the clear evidence of increased cardiovascular disease (CVD) risk factors, the long-term effect on CVD and mortality is still uncertain in women with PCOS, especially in the elderly. Studies in elderly women with PCOS are lacking. The objective was to study morbidity/mortality in PCOS women compared with a reference group up to a mean age above 80 years. Study design: A well-defined cohort of women with PCOS, examined in 1987 and 2008, was re-examined 32 years later in 2019 (age range 72-91 years), in parallel with an age-matched reference group. For deceased women register data was used, for women alive interviews were done, and medical records studied. Blood pressure and blood tests were analyzed. Morbidity and mortality data was available in 35/36 women with PCOS, and in 99/118 women in the reference group. Results: At mean age 81 years there was no difference in all-cause mortality (HR 1.1, ns), CVD-related mortality (HR 1.7, ns), all CVD (HR 1.2, ns), hypertension (HR 1.8, ns), type 2 diabetes (HR 1.7, ns), in levels of blood lipids, glucose, insulin or thyroid hormones. Comparing baseline data from the deceased and living women with PCOS, no differences were found regarding age, menopausal age, BMI, HOMA-IR, FAI, total testosterone or SHBG. However, deceased women with PCOS had a higher WHR (0.87 vs. 0.80; p-value < 0.01) at baseline. Conclusions: No evidence of increased all-cause mortality or CVD was found in women with PCOS. The

elevated testosterone levels and CVD risk profile in PCOS present during perimenopause do not seem to be associated with increased CVD morbidity/mortality risk later in life.

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Effect of Risk-Reducing Salpingo-Oophorectomy on Sex-Steroid Hormone Serum Levels among Post-Menopausal Women: An NRG Oncology/GOG Study

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Background: Risk-reducing salpingo-oophorectomy (RRSO) is an effective ovarian cancer risk-reduction strategy. However, bilateral oophorectomy has also been associated with increased long-term non-neoplastic sequelae, effects suggested to be mediated through reductions in systemic sex steroid hormone levels. Currently, it is unclear whether the post-menopausal ovary contributes to the systemic hormonal milieu, or whether post-menopausal ovarian volume or other factors, such as body mass index (BMI) and age, affect systemic hormone levels. Objectives: We examined the impact of oophorectomy on sex-steroid hormone levels in post-menopausal women. We also explored how well ovarian volume measured by transvaginal ultrasound (TVUS) correlated with direct ovarian measures obtained during surgical pathology evaluation and investigated the association between hormone levels and ovarian volumes. Study design: Post-menopausal women who underwent RRSO (cases, n=180) or ovarian cancer screening (controls, n=38) enrolled in an international, prospective study of RRSO and risk of ovarian cancer algorithm (ROCA)-based screening among women at increased risk of ovarian cancer (GOG-0199) were included in this analysis. Controls were frequency-matched to the cases on age-at-menopause, age-at-study entry, and time interval between blood draws. Ovarian volume was calculated using measurements obtained from TVUS in both cases and controls, and measurements recorded in surgical pathology reports from cases. Serum hormone levels of testosterone, androstenedione, androstenediol, dihydrotestosterone, androsterone, dehydroepiandrosterone, estrone, estradiol, and sex-hormone binding globulin (SHBG) were measured at baseline and follow-up. Spearman correlation coefficients were used to compare ovarian volumes as measured on TVUS and pathology examinations. Correlations between ovarian volumes by TVUS and measured hormone levels were examined using linear regression models. All models were adjusted for age. Paired t-tests were performed to evaluate individual differences in hormone levels pre- and post-RRSO. Results: Ovarian volumes measured by TVUS were only moderately correlated with those reported on pathology reports (Spearman's rho (ρ)=0.42). The median time interval between RRSO and follow-up for the cases was 13. 3 months (range 6.0 -19.3 months) and between baseline and follow-up for the controls was 12.7 months (range 8.7-13.4 months). Sex-steroid levels decreased with age but were not correlated with TVUS ovarian volume, BMI, or time since menopause. Estradiol levels were significantly lower post-RRSO (% change -61.9 post-RRSO vs. +15.2 in controls, p=0.02) but no significant differences were seen for the other hormones. Conclusion: Ovarian volumes measured by TVUS were moderately correlated with volumes directly measured on pathology specimens and were not correlated with sex steroid hormone levels in postmenopausal women. Estradiol was the only hormone that declined significantly following RRSO. Thus, it remains unclear whether the limited post-RRSO changes in sex steroid hormones among post-menopausal women impacts long-term adverse outcomes.

Menopause. 2022 Jan 14;29(3):317-326. doi: 10.1097/GME.0000000000001914.

Low sexual function is associated with menopausal status in mid-aged women with human immunodeficiency virus infection

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Objective: To assess the association between menopausal status and female sexual function among mid-aged women with human immunodeficiency virus (HIV) infection. Methods: We carried out a cross-sectional study of 221 sexually active HIV-infected women ages 40 to 59 years, based on a secondary analysis of a three-hospital survey in Lima, Perú. We classified menopausal status according to Stages of Reproductive Aging Workshop criteria (STRAW+10); this exposure variable was categorized as binary (non-postmenopausal and postmenopausal) and-for exploratory analysis-as multinomial (pre-, peri-, and postmenopausal). We defined low sexual function (LSF) using the 6-item Female Sexual Function Index (total score ≤19). Socio-demographic and clinical variables were assessed, including age, used highly active antiretroviral therapy scheme, disease duration, depressive symptoms, and co-morbidities. We performed Poisson generalized linear models with a robust variance to estimate 95% confidence interval (CI), crude prevalence ratios (cPRs), and adjusted prevalence ratios (aPRs) by epidemiological and statistical approaches using nonparametric method of bias-corrected and accelerated bootstrap resampling with 1,000 repetitions. Results: Studied women had a

median age of 47.0 years (interquartile range: 7.5); 25.3% were premenopausal, 25.8% were perimenopausal, and 48.9% were postmenopausal. Also, 64.3% had LSF. The frequency of LSF was 53.6% in non-postmenopausal and 75.0% in postmenopausal women. Postmenopausal status was associated with LSF in both the crude (cPR = 1.39; 95% CI: 1.13-1.71) and the adjusted regression models (aPR = 1.38; 95% CI: 1.12-1.71). Conclusions: HIV-infected postmenopausal women have a higher prevalence of LSF than those non-postmenopausal ones, even when adjusting for multiple potential confounders.

Menopause. 2022 Jan 24;29(3):276-283. doi: 10.1097/GME.0000000000001913.

The long-term association between bilateral oophorectomy and depression: a prospective cohort study

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Objective: Depression is a leading cause of disability globally and affects more women than men. Ovarian sex steroids are thought to modify depression risk in women and interventions such as bilateral oophorectomy that permanently change the sex steroid milieu may increase the risk of depression. This study aimed to investigate the associations between unilateral and bilateral oophorectomy and depression over a 25-year period (1993-2018) and whether this varied by age at oophorectomy or use of menopausal hormone therapy. Methods: Twenty-five thousand one hundred eighty-eight nurses aged ≥45 years from the Danish Nurse Cohort were included. Nurses with depression prior to baseline were excluded. Poisson regression models, with log-transformed person-years as offset, were used to assess the associations between oophorectomy and incident depression. Nurses who retained their ovaries were the reference group. Results: Compared with nurses with retained ovaries, bilateral oophorectomy was associated with a slightly higher rate of depression (rate ratio [RR], 1.08; 95% confidence interval [CI], 0.95-1.23), but without statistical significance. However, when stratified by age at oophorectomy, compared with nurses with retained ovaries, bilateral oophorectomy at age ≥51 years was associated with higher rates of depression (RR 1.16; 95% CI, 1.00-1.34), but not bilateral oophorectomy at age <51 years (RR 0.86; 95% CI, 0.69-1.07); P value for difference in estimates = 0.02. No association between unilateral oophorectomy and depression was observed. Conclusions: In this cohort of Danish female nurses, bilateral oophorectomy at age ≥51 years, but not at younger ages, was associated with a slightly higher rate of depression compared with those who retained their ovaries.

Turk Kardiyol Dern Ars. 2022 Jan;50(1):57-65. doi: 10.5543/tkda.2022.47443.

Impact of metabolic syndrome and systemic inflammation on endothelial function in postmenopausal women

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Objective: Data on the impact of metabolic syndrome (MetS) and systemic inflammation on endothelial function remains scarce. In this study, we aimed to investigate the combined effects of MetS and systemic inflammation on endothelial function in postmenopausal women. Methods: We identified 423 postmenopausal women from February 2019 through July 2020. MetS was diagnosed according to the International Diabetes Federation (IDF) criteria, and high sensitivity C-reaction protein (hs-CRP) was measured to assess the degree of underlying inflammation. The measurement of endothelial function was using digital arterial tonometry by assessing reactive hyperemia-induced vasodilation in one arm and adjusting for changes in the contralateral arm (reactive hyperemia index, RHI). Results: There were 156 patients with MetS and 267 without MetS. Compared to the group without MetS, patients with MetS had significantly lower natural logarithmic RHI (0.66±0.29 versus 0.91±0.31; p<0.001), but higher levels of hs-CRP (0.98 [0.31, 3.54] versus 0.53 [0.20, 2.14]; p<0.001). In sequential multivariable analysis, the presence of hs-CRP (ΔR2=0.047, p=0.004) had a significant and independent influence on natural logarithmic RHI. Furthermore, the interaction of hs-CRP*MetS was synergistically associated with endothelial dysfunction even in the fully adjusted model (β=-0.107, 95% CI [-0.161~-0.053], p=0.009). Conclusion: MetS and systemic inflammation are synergistically associated with endothelial dysfunction in postmenopausal women. Postmenopausal women with both these conditions appear to be at a significantly higher risk for adverse cardiovascular events.