Selección de Resúmenes de Menopausia

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Vertebral fractures and bone mineral density in patients with idiopathic hypoparathyroidism on long term follow-up.

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CONTEXT:Bone mineral density (BMD) is increased in patients with idiopathic hypoparathyroidism (IH). PTH deficiency, hypocalcemic seizures and anticonvulsants could compromise skeletal health in IH leading to vertebral fractures. However, there is limited information on the prevalence of vertebral fractures in hypoparathyroidism. OBJECTIVE: To assess the prevalence of vertebral fractures and related factors in a cohort of patients with IH and change in BMD during long-term follow-up. DESIGN: Vertebral fractures were assessed using quantitative vertebral morphometry of thoracic and lumbar spine. BMD was assessed by DXA at lumbar spine, hip and forearm. Change in BMD was assessed in subset of 27 patients after 10 years follow-up interval. SETTING: The Endocrine clinic of All India Institute of Medical Sciences, New Delhi, Patients and other participants: 104 patients with IH and 64 healthy controls. Hypocalcemia, hyperphosphatemia, normal blood urea and serum creatinine and low serum intact-PTH levels were used as diagnostic criteria for IH. RESULTS: Vertebral fractures were observed in 18.3% patients with IH and in 4.7% of controls (OR, 4.54, 95% CI=1.28-16.04). Longer use of anticonvulsants and menopause were significantly associated ($P < 0.05$) with vertebral fractures. Mean BMD at lumbar spine and hip were higher by 21.4% and 8.6 % in IH than controls ($P <0.001$). BMD significantly increased during follow-up at all three sites. Change in BMD correlated with serum calcium/phosphorus ratio maintained during follow-up. CONCLUSIONS: Despite increased BMD, prevalence of vertebral fractures is more in patients with IH especially in post-menopausal women and in those on anticonvulsant therapy.

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Thyroid hormones and cardiovascular disease.

Jabbar A, Pingitore A, Pearce SH, Zaman A, Iervasi G, Razvi S.

Myocardial and vascular endothelial tissues have receptors for thyroid hormones and are sensitive to changes in the concentrations of circulating thyroid hormones. The importance of thyroid hormones in maintaining cardiovascular homeostasis can be deduced from clinical and experimental data showing that even subtle changes in thyroid hormone concentrations - such as those observed in subclinical hypothyroidism or hyperthyroidism, and low triiodothyronine syndrome - adversely influence the cardiovascular system. Some potential mechanisms linking the two conditions are dyslipidaemia, endothelial dysfunction, blood pressure changes, and direct effects of thyroid hormones on the myocardium. Several interventional trials showed that treatment of subclinical thyroid diseases improves cardiovascular risk factors, which implies potential benefits for reducing cardiovascular events. Over the past 2 decades, accumulating evidence supports the association between abnormal thyroid function at the time of an acute myocardial infarction (MI) and subsequent adverse cardiovascular outcomes. Furthermore, experimental studies showed that thyroid hormones can have an important therapeutic role in reducing infarct size and improving myocardial function after acute MI. In this Review, we summarize the literature on thyroid function in cardiovascular diseases, both as a risk factor as well as in the setting of cardiovascular diseases such as heart failure or acute MI, and outline the effect of thyroid hormone replacement therapy for reducing the risk of cardiovascular disease.

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The effects of transdermal testosterone and oestrogen therapy on dry eye in postmenopausal women: a randomised, placebo-controlled, pilot study.

Golebiowski B, Badarudin N, Eden J, Gerrand L, Robinson J, Liu J, Hampel U, You J, Stapleton F.

AIMS: Sex hormones could provide a future treatment avenue for dry eye post menopause. However, there are few well-controlled studies. This study investigates the impact of testosterone and oestrogen on dry eye symptoms and

signs in postmenopausal women. METHODS: A randomised double-blind placebo-controlled pilot study was conducted involving 40 women with dry eye (age 63.9±5.1 years, 13.2±6.3 years post menopause). Ten women were assigned to each of four treatment groups: transdermal testosterone, oestradiol, testosterone/oestradiol combination and placebo. Assessment at baseline and after 8 weeks: ocular symptoms, tear osmolarity, tear stability, tear secretion, meibomian gland assessment, corneal and conjunctival sensitivity, serum concentrations of 17β-oestradiol, 3-α-androstanediol-glucuronide and dehydroepiandrosterone sulfate. Differences from placebo were examined using one-way analysis of variance and Dunnett's t-test. Within-group analyses included paired t-tests and Spearman correlation.
RESULTS: Dryness intensity after 8 weeks was significantly worse in the oestrogen group compared with placebo (p=0.04). No significant changes in other symptoms, tear function, meibomian gland function, lid morphology, corneal or conjunctival sensitivity were observed in any of the groups when compared with the change in placebo after 8 weeks. Within-group analyses showed increased tear secretion in the testosterone/oestradiol combination group (p=0.03) and a strong association between increased serum androgen and improved tear stability in the testosterone group (ρ=0.83,p=0.01). CONCLUSIONS: Oestrogen supplementation may worsen ocular symptoms in postmenopausal women with dry eye, whereas no impact of testosterone therapy on symptoms was apparent. The positive effects of oestrogen and testosterone on tear function require confirmation in a larger study, with sample size calculated from the data generated herein. Placebo control is essential in studies of dry eye therapies.

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Menstrual cycle-related variation in autonomic nervous system functioning in women in the early menopausal transition with and without insomnia disorder.

de Zambotti M, Trinder J, Colrain IM, Baker FC.

Insomnia is considered a hyperarousal disorder, in which several psychophysiological domains including the autonomic nervous system (ANS) are over-activated, potentially contributing to increased risk for cardiovascular (CV) disease. Here, we aimed to determine whether insomnia that develops in the context of the transition to menopause (menopausal transition insomnia, MTI) is similarly characterized by autonomic arousal. We also took into account modulation of the ANS by the hormonal changes of the menstrual cycle, a factor that has not previously been considered in studies on insomnia. Twenty one women with insomnia (49.0±3y) and 25 controls (48.8±2.6 y), also in the menopausal transition, had overnight laboratory-based polysomnographic recordings, including electrocardiograph, during the follicular and/or luteal (progesterone≥3ngml-1) phases of the menstrual cycle, with 21 women having recordings in both phases. Nocturnal time and frequency-domain heart rate variability (HRV) measures were calculated. Heart rate (HR) was significantly elevated (by ~4bpm) in MTI compared to controls in both follicular and luteal phases, across hours of the night, including during undisturbed periods of NREM and REM sleep (p<0.05). A higher HR tended to be associated with lower frequency- and time-domain vagal HRV indices in MTI compared with controls. In both groups, HR was significantly higher and total and high frequency HRV measures were lower in the luteal phase compared to the follicular phase (p<0.05). In addition, REM compared to NREM sleep was characterized by increased HR coupled with decreased vagal modulation and increased sympathovagal balance (p<0.01). Insomnia in the menopausal transition is characterized by nocturnal autonomic hyperarousal during both follicular and luteal phases of the menstrual cycle, which could be a factor in the etiology of MTI as well as a potential CV risk factor.

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Hormone-replacement therapy: current thinking.

Lobo RA.

For several decades, the role of hormone-replacement therapy (HRT) has been debated. Early observational data on HRT showed many benefits, including a reduction in coronary heart disease (CHD) and mortality. More recently, randomized trials, including the Women's Health Initiative (WHI), studying mostly women many years after the the onset of menopause, showed no such benefit and, indeed, an increased risk of CHD and breast cancer, which led to an abrupt decrease in the use of HRT. Subsequent reanalyzes of data from the WHI with age stratification, newer randomized and observational data and several meta-analyses now consistently show reductions in CHD and mortality when HRT is initiated soon after menopause. HRT also significantly decreases the incidence of various

symptoms of menopause and the risk of osteoporotic fractures, and improves quality of life. In younger healthy women (aged 50-60 years), the risk-benefit balance is positive for using HRT, with risks considered rare. As no validated primary prevention strategies are available for younger women (<60 years of age), other than lifestyle management, some consideration might be given to HRT as a prevention strategy as treatment can reduce CHD and all-cause mortality. Although HRT should be primarily oestrogen-based, no particular HRT regimen can be advocated.

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Body Fat and Physical Activity Modulate the Association Between Sarcopenia and Osteoporosis in Elderly Korean Women.

Lee I, Cho J, Jin Y, Ha C, Kim T, Kang H.

This study examined whether modifiable lifestyle factors, such as body fatness and physical activity, modulate the association between sarcopenia and osteoporosis. In a cross-sectional design, 269 postmenopausal women, aged 65 years and older, underwent dual-energy X-ray absorptiometry (DEXA) scans to measure their body fat percentage, total fat mass, total fat-free mass, appendicular lean mass, bone mineral density (BMD) and bone mineral content. The participants wore a uniaxial accelerometer for seven consecutive days to quantify daily physical activity. The collected data were analyzed using descriptive statistics, Pearson correlation, and a binary logistic regression. Pearson correlation analyses showed that total neck/femur BMD was positively associated with weight-adjusted appendicular skeletal muscle mass (ASM) and objectively-measured physical activities. ASM was positively associated with body fatness. Binary logistic regression analyses showed that the odds ratio (OR) of sarcopenia for osteopenia and/or osteoporosis was substantially attenuated but remained marginally significant when adjusted for age and postmenopausal period (OR = 2.370 and p = 0.050). However, the OR was no longer significant when additionally adjusted for body fatness (OR = 2.218 and p = 0.117) and physical activity (OR = 1.240 and p = 0.448). The findings of the study showed that, in this sample of elderly Korean women, modifiable lifestyle risk factors such as body fatness and physical inactivity played an important role in determining the association between sarcopenia and osteopenia/osteoporosis.

Cancer Prev Res (Phila). 2016 Nov;9(11):835-843.

Dietary Weight Loss, Exercise, and Oxidative Stress in Postmenopausal Women: A Randomized Controlled Trial.

Duggan C, Tapsoba JD, Wang CY, Campbell K, Foster-Schubert K, Gross MD, McTiernan A.

Oxidative stress, a potential mechanism linking obesity and cancer, results from an imbalance between activation/inactivation of reactive oxygen species, byproducts of cellular metabolism. In a randomized controlled trial, we investigated effects of diet and/or exercise on biomarkers of oxidative stress. A total of 439 overweight/obese [body mass index (BMI) > 25 kg/m2] postmenopausal women, ages 50 of 75 years, were randomized to 12 months of (i) reduced-calorie weight loss diet ("diet"; n = 118); (ii) moderate-to-vigorous intensity aerobic exercise ("exercise"; n = 117); (iii) combined diet and exercise intervention ("diet + exercise"; n = 117); or (iv) control (n = 87). Outcomes were circulating markers of oxidative stress, including fluorescent oxidation products (FOP), F2-isoprostanes, and oxidized low-density lipoprotein (LDL). On average, participants were 57.9 years, with a BMI of 30.9 kg/m2 F2-isprostanes were significantly reduced in the diet (-22.7%, P = 0.0002) and diet + exercise (-23.5%, P < 0.0001) arms versus controls (-2.99%) and nonsignificantly reduced in the exercise arm (-14.5%, P = 0.01). Participants randomized to the diet and diet + exercise arms had significant increases in levels of FOP [control -5.81%; diet +14.77% (P = 0.0001); diet + exercise +17.45%, (P = 0.0001)]. In secondary analyses, increasing weight loss was statistically significantly associated with linear trends of greater reductions in oxidized LDL and in F2-isoprostanes and increases in FOP. Compared with controls, exercise participants whose maximal oxygen consumption increased had significant decreases in levels of F2-isoprostanes and in oxidized LDL and increases in FOP. Dietary weight loss, with or without exercise, significantly reduced some markers of oxidative stress in postmenopausal women