Selección de Resúmenes de Menopausia

Semana del 3 al 10 de Febrero de 2015

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Variation in C-reactive Protein Following Weight Loss in Obese Insulin Resistant Postmenopausal Women: is there an Independent Contribution of Lean Body Mass?

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Background: We showed that obese insulin resistant postmenopausal women are characterized by higher lean body mass and elevated C-reactive protein. Although counterintuitive, we hypothesized that losses in muscle mass following caloric restriction and increase in muscle quality will be associated with improvements in glucose homeostasis through decreases in C-reactive protein. Objectives: To determine 1) if improvements in C-reactive protein concentrations occurs through losses in lean body mass; and 2) if decreases in C-reactive protein levels contribute to improvements in insulin sensitivity. Methods: 50 postmenopausal women (body mass index>26 kg/m²) with impaired glucose disposal (<7.5 mg/kg/min) completed a 6-month caloric restriction program. Outcome measures were: Glucose disposal rate: M value (by hyperinsulinemic-euglycemic clamp), body composition (total, trunk, and appendicluar). LBM and FM by DXA), LBM index (LBM (kg)/height (m2), body fat distribution (VAT and SAT by CT scan) and plasma high-sensitive C-reactive protein (hsCRP) and interleukin-6 (Il-6). Results: Significant correlations were observed between Δ hsCRP levels with Δ Il-6 (r=0.33, p≤0.05), Δ total LBM index (r=0.44, p≤0.01), Δ trunk LBM (r=0.38, p≤0.01) Δ SAT (r=0.35, p≤0.05) and Δ glucose disposal rate (r=- 0.44, p≤0.01). After including all the correlated variables in Stepwise linear regression model, Δ LBM index was the only independent predictor of the reduction in hsCRP levels (R2=0.20, p≤0.01). Conclusion: Losses in total lean body mass are independently associated with improvements in inflammatory state (CRP levels) in obese postmenopausal women with impaired glucose disposal.

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Hormone replacement therapy and Parkinson's disease risk in women: a meta-analysis of 14 observational studies.

Wang P, Li J, Qiu S, Wen H, Du J.

BACKGROUND AND PURPOSE: Published data on the relationship of hormone replacement therapy (HRT) with Parkinson's disease (PD) were inconclusive. Thus, a systematic meta-analysis of observational studies was performed to clarify this topic. METHODS: The databases of PubMed and EMBASE were searched for case-control or cohort studies published up till June 2, 2014. Meta-analysis of the relative risks (RRs) with 95% confidence intervals (CIs) was estimated using random-effects models. RESULTS: A final total of ten case-control and four cohort studies were included in our meta-analysis. The overall combined RR of PD for ever users versus never users of HRT was 1.00 (95% CI: 0.84-1.20). Limited to those subjects who only use estrogen, a similar trend was detected (RR: 0.95, 95% CI: 0.69-1.30). In the subgroup analysis by study design, no significant association was observed in case-control studies (RR: 0.79, 95% CI: 0.62-1.02), whereas a positive association was found in cohort studies (RR: 1.24, 95% CI: 1.10-1.40). In further analysis according to study quality, an inverse association was found in the low-quality group (RR: 0.58, 95% CI: 0.40-0.82), whereas a positive association was found in the high-quality group (RR: 1.16, 95% CI: 1.02-1.31). CONCLUSION: In summary, our results of meta-analysis do not support a protective role of HRT in female PD development.

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Association between some inflammatory markers and primary ovarian insufficiency.

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OBJECTIVE: This study investigated the discriminative values of neutrophil-to-lymphocyte ratio (NLR), serum amyloid A protein (SAA), and C-reactive protein (CRP) in cases of primary ovarian insufficiency (POI). METHODS: A total of 84 women were included in this comparative cross-sectional study. The study group consisted of 43 women diagnosed as having POI, and the control group consisted of 41 women with normal fertility. After obtaining a written informed consent form from all participants, we retrieved clinical and demographic data and laboratory findings from the participants and the hospital database. The following variables were analyzed: age, body mass index, smoking, family history, comorbidities, sonographic findings, complete blood count, baseline hormone levels, CRP, and SAA. RESULTS: NLR was significantly lower in the study group than in the control group (mean [SD], 1.3 [0.7] vs 2.0 [0.7]; P < 0.001). The mean SAA level was 151.6 ng/mL (range, 48.5-12,554.7 ng/mL) in the study group and 147.8 ng/mL (range, 29.8-3,760.4 ng/mL) in the control group (P > 0.05). There was no significant difference in serum CRP levels between two groups (P > 0.05). Receiver operating characteristic analysis revealed that NLR, but not SAA and CRP, was a significantly discriminative parameter for POI (area under the curve, 0.829; P < 0.001). Multivariate logistic regression analysis showed that a family history of POI, smoking, and NLR of 1.5 or less were independent risk factors for POI. CONCLUSIONS: SAA and CRP do not seem to be valuable discriminative markers for POI, whereas NLR may be a significant promising marker before presentation or in the early stages of POI and may be useful for developing appropriate fertility treatment options.

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Intramuscular sex steroid hormones are associated with skeletal muscle strength and power in women with different hormonal status.

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Estrogen (E2)-responsive peripheral tissues, such as skeletal muscle, may suffer from hormone deficiency after menopause potentially contributing to the aging of muscle. However, recently E2 was shown to be synthesized by muscle and its systemic and intramuscular hormone levels are unequal. The objective of the study was to examine the association between intramuscular steroid hormones and muscle characteristics in premenopausal women (n = 8) and in postmenopausal monozygotic twin sister pairs (n = 16 co-twins from eight pairs) discordant for the use of E2 -based hormone replacement. Isometric skeletal muscle strength was assessed by measuring knee extension strength. Explosive lower body muscle power was assessed as vertical jump height. Due to sequential nature of enzymatic conversion of biologically inactive dehydroepiandrosterone (DHEA) to testosterone (T) and subsequently to E2 or dihydrotestosterone (DHT), separate linear regression models were used to estimate the association of each hormone with muscle characteristics. Intramuscular E2 , T, DHT, and DHEA proved to be significant, independent predictors of strength and power explaining 59-64% of the variation in knee extension strength and 80-83% of the variation of vertical jumping height in women (P < 0.005 for all models). The models were adjusted for age, systemic E2 , and total body fat mass. The statistics used took into account the lack of statistical independence of twin sisters. Furthermore, muscle cells were shown to take up and actively synthesize hormones. Present study suggests intramuscular sex steroids to associate with strength and power regulation in female muscle providing novel insight to the field of muscle aging.

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Systematic review and meta-analysis of the performance of clinical risk assessment instruments for screening for osteoporosis or low bone density.

Nayak S, Edwards DL, Saleh AA, Greenspan SL.

We performed a systematic review and meta-analysis of the performance of clinical risk assessment instruments for screening for DXA-determined osteoporosis or low bone density. Commonly evaluated risk instruments showed high sensitivity approaching or exceeding 90 % at particular thresholds within various populations but low specificity at thresholds required for high sensitivity. Simpler instruments, such as OST, generally performed as well as or better than more complex instruments. INTRODUCTION: The purpose of the study is to systematically review the performance of clinical risk assessment instruments for screening for dual-energy X-ray absorptiometry (DXA)-determined osteoporosis or low bone density. METHODS: Systematic review and meta-analysis were performed. Multiple literature sources were searched, and data extracted and analyzed from included references. RESULTS: One hundred eight references met inclusion criteria. Studies assessed many instruments in 34 countries, most commonly the Osteoporosis Self-Assessment Tool (OST), the Simple Calculated Osteoporosis Risk Estimation

(SCORE) instrument, the Osteoporosis Self-Assessment Tool for Asians (OSTA), the Osteoporosis Risk Assessment Instrument (ORAI), and body weight criteria. Meta-analyses of studies evaluating OST using a cutoff threshold of <1 to identify US postmenopausal women with osteoporosis at the femoral neck provided summary sensitivity and specificity estimates of 89 % (95%CI 82-96 %) and 41 % (95%CI 23-59 %), respectively. Meta-analyses of studies evaluating OST using a cutoff threshold of 3 to identify US men with osteoporosis at the femoral neck, total hip, or lumbar spine provided summary sensitivity and specificity estimates of 88 % (95%CI 79-97 %) and 55 % (95%CI 42-68 %), respectively. Frequently evaluated instruments each had thresholds and populations for which sensitivity for osteoporosis or low bone mass detection approached or exceeded 90 % but always with a trade-off of relatively low specificity. CONCLUSIONS: Commonly evaluated clinical risk assessment instruments each showed high sensitivity approaching or exceeding 90 % for identifying individuals with DXA-determined osteoporosis or low BMD at certain thresholds in different populations but low specificity at thresholds required for high sensitivity. Simpler instruments, such as OST, generally performed as well as or better than more complex instruments.