



Menopause

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CONTENTS

Editorials

443

Are hot flashes linked to cardiovascular risk? It is too early to tell

Eiran Z. Gorodeski, MD, MPH

445

A tender subject

Leon Speroff, MD

450

Hot flash zeitgebers: still no clear message

Nancy E. Reame, MSN, PhD, FAAN

452

Selective estrogen receptor modulators and vulvovaginal atrophy: can we improve the lives of our patients with new therapeutic options?

Lee P. Shulman, MD

454

A simple inexpensive screening test for endometrial abnormalities in asymptomatic women using tamoxifen

David F. Archer, MD

Articles

456

Hot flashes and cardiac vagal control: a link to cardiovascular risk?

Rebecca C. Thurston, PhD, Israel C. Christie, PhD, and Karen A. Matthews, PhD

Findings from this laboratory investigation indicated acute reductions in high-frequency heart rate variability during physiologically assessed hot flashes.

These findings shed additional light on the physiology of hot flashes, suggesting a role for vagal control in hot flashes.

(continued)

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462

Predictors of breast discomfort among women initiating menopausal hormone therapy

Carolyn J. Crandall, MD, MS, Daniela Markovic, MS, Mei-Hua Huang, DrPH, and Gail A. Greendale, MD

This study analyzed data from a trial comparing the effects of placebo, conjugated equine estrogens alone, or conjugated equine estrogens plus progestogen among postmenopausal women. Self-reported strenuous exercise and higher body weight were each associated with significantly lower odds of experiencing new-onset of breast tenderness after hormone therapy initiation.

471

Diurnal rhythm and concordance between objective and subjective hot flashes: the Hilo Women's Health Study

Lynnette L. Sievert, PhD, Angela Reza, BA, Phoebe Mills, MA, Lynn Morrison, PhD, Nichole Rahberg, BA, Amber Goodloe, BA, Michael Sutherland, PhD, and Daniel E. Brown, PhD

In the hot and humid environment of Hilo, HI, the diurnal peak in hot flashes occurred at 15:00 ± 1 hour with no difference by ethnicity. Sternal and nuchal monitoring showed the same frequency of true positive measures, and there were no ethnic differences in the frequency of true positive measures, suggesting no appreciable effect of population variation in sweating patterns on hot flash measures.

480

Ospemifene effectively treats vulvovaginal atrophy in postmenopausal women: results from a pivotal phase 3 study

Gloria A. Bachmann, MD, Janne O. Komi, MD, PhD, and The Ospemifene Study Group

This pivotal phase 3 study demonstrates that ospemifene is effective in treating both subjective measures (symptom relief) and objective measures (maturation index and vaginal pH) of vulvovaginal atrophy in postmenopausal women. The positive effect of ospemifene is demonstrated over and above the use of provided vaginal lubricants.

487

Value of the progesterone test in screening for endometrial pathology in asymptomatic postmenopausal women receiving treatment with tamoxifen

Daniel María Lubián López, MD, PhD, Yurena González Fernandez, BS, Begoña Rodríguez Rodríguez, BS, Francisco Martín Orihuela López, MD, and Rafael Comino Delgado, MD, PhD

The inexpensive Progesterone Challenge Test could be an efficient method of screening for endometrial pathology in asymptomatic postmenopausal women during or before initiation of treatment with tamoxifen.

494

Determinants of age at natural menopause in the Isparta Menopause and Health Study: premenopausal body mass index gain rate and episodic weight loss

Zeynep D. Aydın, MD

In this cross-sectional study, premenopausal body mass index gain rate and a premenopausal history of episodic weight loss of less than 5 kg are independently associated with later age at natural menopause.

506

Premature menopause is associated with increased risk of cerebral infarction in Japanese women

Yosuke Baba, MD, Shizukiyo Ishikawa, MD, Yoko Amagi, MD,
Kazunori Kayaba, MD, Tadao Gotoh, MD, and Eiji Kajii, MD

In a cohort of Japanese women, those undergoing menopause before the age of 40 years were at increased risk of cerebral infarction. Premature menopause may therefore indicate the need for more aggressive prevention of cerebral infarction.

511

Risk of long-term pelvic recurrences after fluid minihysterectomy in women with endometrial carcinoma: a controlled randomized study

Ettore Cicinelli, MD, Raffaele Tinelli, MD, Giuseppe Colafoglio, MD,
Francesca Fortunato, MD, Annarita Fusco, MD, Salvatore Mastrolia, MD,
Anna Rosa Fucci, MD, and Achirpita Lepera, MD

Preoperative low-pressure fluid mini-hysterectomy does not increase the risk of intraperitoneal transport of endometrial carcinoma cells during examination or the risk of pelvic recurrence at 5-year follow-up.

516

Ovariectomy in aged versus young rats augments matrix metalloproteinase-mediated vasoconstriction in mesenteric arteries

Olga N. Lekontseva, MD, Christian F. Rueda-Clausen, MD, Jude S. Morton, PhD,
and Sandra T. Davidge, PhD

A novel proconstrictor pathway mediated by proteolytic enzyme matrix metalloproteinases via a cleavage of big endothelin-1 seems to underlie increased resistance artery reactivity in a rat model of female aging.

524

Estrogen therapy and risk of breast cancer in postmenopausal women: a case-control study and results of a multivariate analysis

Franco Lumachi, MD, Anna Chiara Frigo, MSc, Umberto Basso, MD,
Valeria Tombolan, and Mario Ermani, MD

The aim of this study was to assess the effects of exposure to both hormone therapy and oral contraceptives on breast cancer risk in postmenopausal women all residing in the same metropolitan area.

529

Impact of walking on eating behaviors and quality of life of premenopausal and early postmenopausal obese women

Eléonor Riesco, PhD, Sébastien Tessier, BSc, Francine Pérusse, BSc, Sabrina Turgeon, MSc, Angelo Tremblay, PhD, John Weisnagel, MD, Jean Doré, MSc, MD, and Pascale Mauriège, PhD

Despite modest body weight and fat mass losses, a 16-week walking program (three sessions per week of 45 min at 60% of heart rate reserve) seems to be sufficient to improve health-related quality of life in late premenopausal and early postmenopausal obese and sedentary women.

539

Surgical and survival outcomes in older women with endometrial cancer treated by laparoscopy

Gabriele Siesto, MD, Stefano Uccella, MD, Fabio Ghezzi, MD, Antonella Cromi, PhD, Francesca Zefiro, MD, Maurizio Serati, MD, and Pierfrancesco Bolis, MD

In the absence of absolute anesthesiology contraindications, laparoscopy seems to be feasible and safe in older endometrial cancer patients.

545

The prevalence of depression symptoms and influencing factors among perimenopausal and postmenopausal women

Sermin Timur, PhD and Nevin Hotun Şahin, PhD

Depression is a common health problem in the menopausal transition. Being perimenopausal or postmenopausal, the presence of an event story negatively affecting life, and a body mass index of 25 kg/m² or higher are significant risk factors in the development of depression.

552

Life course socioeconomic adversity and age at natural menopause in women from Latin America and the Caribbean

Maria P. Vélez, MD, MSc, Beatriz E. Alvarado, MD, PhD, Catherine Lord, PhD, and Maria-Victoria Zunzunegui, MA, PhD

This work provides evidence for a lifelong cumulative effect of socioeconomic adversities on age at natural menopause. Latin American and Caribbean women experience natural menopause at an earlier age than do women from high-income countries.

560

Impact of gender on left ventricle function in postmenopausal women and age-matched men: analysis of echocardiographic parameters in healthy participants and patients with coronary artery disease

Karina Wierzbowska-Drabik, MD, PhD, Maria Krzemińska-Pakuła, MD, PhD, Małgorzata Kurpesa, MD, PhD, Ewa Trzos, MD, PhD, Tomasz Rechciński, MD, PhD, Paulina Wejner-Mik, MD, PhD, Michał Plewka, MD, PhD, and Jarosław D. Kasprzak, MD, PhD

Diastolic function may be better preserved in postmenopausal women than in age-matched men, but coronary artery disease may more strongly impair left ventricular relaxation in women.

566

The prevalence of metabolic syndrome in Chinese postmenopausal women and the optimum body composition indices to predict it

Xiangyan Ruan, MD, PhD, Jing Jin, MS, Lin Hua, MS, Yulan Liu, Juan Wang, BS, and Shunyu Liu, MS

The prevalence of metabolic syndrome in Chinese postmenopausal women was 33.7%. Body composition indices such as waist circumference, body fat, sagittal abdominal diameter, and body mass index could be used to predict metabolic syndrome in Chinese postmenopausal women.

571

The impact of smoking on antimüllerian hormone levels in women aged 38 to 50 years

Beth J. Plante, MD, Glinda S. Cooper, PhD, Donna D. Baird, PhD, and Anne Z. Steiner, MD, MPH

Active smoking, but not former smoking, is associated with decreased antimüllerian hormone values in late reproductive age and perimenopausal women, suggesting a possible direct effect of smoking on depletion of the antral but not primordial follicles.

577

A novel flavonoid, 6-C- β -D-glucopyranosyl-(2S,3S)-(+)-3',4',5,7-tetrahydroxyflavanone, isolated from *Ulmus wallichiana* Planchon mitigates ovariectomy-induced osteoporosis in rats

Kunal Sharan, MSc, Gaurav Swarnkar, MSc, Jawed A. Siddiqui, MSc, Avinash Kumar, MSc, Preeti Rawat, MSc, Manmeet Kumar, MSc, Geet K. Nagar, MSc, Lakshmi Manickavasagam, MPharm, Sheelendra P. Singh, MSc, Geetanjali Mishra, PhD, Wahajuddin, PhD, Girish K. Jain, PhD, Rakesh Maurya, PhD, and Naibedy Chattoopadhyay, PhD
6-C- β -D-glucopyranosyl-(2S,3S)-(+)-3',4',5,7-tetrahydroxyflavanone/Ulmoside A is a naturally occurring small molecule. Daily oral administration of this compound to ovariectomized rats improves bone biomechanical quality through positive modifications of bone mass and trabecular microarchitecture without hyperplastic effect on uterus.

587

One-year soy protein supplementation does not improve lipid profile in postmenopausal women

Sara Chelland Campbell, PhD, Dania A. Khalil, PhD, Mark E. Payton, PhD, and Bahram H. Arjmandi, PhD, RD

This study was designed to evaluate 1-year soy protein supplementation (25 g/d) on lipid profile in postmenopausal women. Results showed that there were no improvements in total cholesterol, low-density lipoprotein, or high-density lipoprotein with supplementation, supporting the reevaluation of the Food and Drug Administration of their health claim linking soy intake and improvements in lipids.

594

Appetitive hormones, but not isoflavone tablets, influence overall and central adiposity in healthy postmenopausal women

Oksana A. Matvienko, PhD, D. Lee Alekel, PhD, Ulrike Genschel, PhD, Laura Ritland, MS, Marta D. Van Loan, PhD, and Kenneth J. Koehler, PhD

This study examined the effect of soy isoflavones on overall and regional body composition taking into account appetitive hormones as potential mediators, as well as the direct effect of treatment on appetitive hormones. One year of treatment with soy isoflavones did not alter body composition in healthy postmenopausal women.

602

Total extract and standardized fraction from the stem bark of *Butea monosperma* have osteoprotective action: evidence for the nonestrogenic osteogenic effect of the standardized fraction

Rashmi Pandey, MSc, Abnish K. Gautam, MSc, Biju Bhargavan, PhD, Ritu Trivedi, PhD, Gaurav Swarnkar, MSc, Geet K. Nagar, MSc, Dinesh K. Yadav, MSc, Manmeet Kumar, MSc, Preeti Rawat, MSc, Lakshmi Manickavasagam, MPharm, Amit Kumar, Rakesh Maurya, PhD, Atul Goel, PhD, Girish K. Jain, PhD, Naibedyia Chattopadhyay, PhD, and Divya Singh, PhD

*The main objective of this study was to determine the skeletal effects of *Butea monosperma* total extract and its acetone soluble fraction in ovariectomized rats, a postmenopausal bone loss model.*

611

Large extracoronary artery diameter in obese postmenopausal women

Tiziana Montalcini, MD, PhD, Antonietta Fava, MD, Alberto Castagna, MD, Gaetano Gorgone, MD, Carmine Gazzaruso, MD, and Arturo Pujia, MD

This study shows a correlation between obesity and, in particular, waist circumference and brachial artery diameter, a surrogate measure of endothelial dysfunction. Obese women and women with larger waist circumference had larger brachial diameter, emphasizing the role of visceral fat in artery remodeling.

615

Effect of dienogest on estrogen-induced nitric oxide production in human umbilical vein endothelial cells and endothelium-dependent vasodilatation in postmenopausal women

Noriko Henmi, MD, Kazuhiro Takahashi, MD, PhD, Mitsuyoshi Amita, MD, Keiko Takata, MD, PhD, Tsuyoshi Ohta, MD, PhD, Seiji Tsutsumi, MD, PhD, Toshifumi Takahashi, MD, PhD, and Hirohisa Kurachi, MD, PhD

Medroxyprogesterone acetate but not dienogest inhibits estrogen-induced nitric oxide production in human umbilical vein endothelial cells. Concurrent administration of dienogest did not reduce the restoration of vasodilatation by estrogen in postmenopausal women.

622

The effects of postmenopausal hormone therapy on serum estrogen, progesterone, and sex hormone-binding globulin levels in healthy postmenopausal women

Kerstin L. Edlefsen, MD, Rebecca D. Jackson, MD, Ross L. Prentice, PhD, Imke Janssen, PhD, Aleksandar Rajkovic, MD, PhD, Mary Jo O'Sullivan, MD, and Garnet Anderson, PhD

Conjugated equine estrogens and combined hormone therapy significantly increased circulating levels of total, free, and bioavailable estradiol; estrone; and sex hormone-binding globulin by twofold to fourfold over placebo after 1 year.

630

Validity and cultural equivalence of the standard Greene Climacteric Scale in Hong Kong

Run Qiu Chen, PhD, Susan R. Davis, PhD, Chit Ming Wong, PhD, and Tai Hing Lam, MD

This study demonstrated the cross-cultural construct validity, internal consistency, test-retest reliability, and responsiveness of a Chinese (Hong Kong Cantonese) version of the standard Greene Climacteric Scale for the assessment of menopausal symptoms in Hong Kong Chinese women aged 40 to 60 years.

636

Laser acupuncture does not improve menopausal symptoms

Kylie A. O'Brien, PhD, B App Sci (Chin Med), MPH, BSc (Optom), Euhna Varigos, MB, BS, FANZCA, FAMAC, Catherine Black, MB, Ch B DCH FRNZCGP, and Paul A. Komesaroff, MB, BS, BSc(Hons), MA, PhD, FRACP

Laser acupoint stimulation chosen from a fixed set of acupoints is no more efficacious than manual stimulation with an inert laser probe in altering menopausal symptoms.

Review Articles

642

Endometrial safety: a key hurdle for selective estrogen receptor modulators in development

JoAnn V. Pinkerton, MD and Steven R. Goldstein, MD

Endometrial safety has been an important consideration in the clinical development of selective estrogen receptor modulators with potentially improved benefit-risk profiles. Promising results have been observed with the targeted development of newer and more tissue-specific selective estrogen receptor modulators, many of which are under investigation for postmenopausal osteoporosis.

654

The effects of raloxifene on mammographic breast density: a review of clinical trials

Leny Pearman, MS, CNS, Risa Kagan, MD, FACOG, CCD, NCMP,
Jody Arsenault, PhD, and David Muram, MD

Overall, raloxifene did not increase or decrease mammographic breast density. At this time, no clinical recommendations can be made with regard to raloxifene and its effects on breast density.

660

Soy isoflavones versus placebo in the treatment of climacteric vasomotor symptoms: systematic review and meta-analysis

Rafael Bolaños, MD, MSc, Angélica Del Castillo, MD, and José Francia, MD, MSc

The overall combined results and the results by subgroups (according to the type of supplement used) showed a significant tendency in favor of soy, but it is still difficult to establish conclusive results given the high heterogeneity found in the studies.

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