Correlation between auditory-vestibular functions and estrogen levels in postmenopausal patients with Meniere's disease.


BACKGROUND: To investigate auditory and vestibular functions, estrogen levels, and its clinical correlation in postmenopausal females with Meniere's disease (MD). METHODS: We retrospectively analyzed the serum estradiol (E2) levels and the auditory and vestibular functions measured by auditory brainstem response (ABR) to high click rate, pure-tone audiometry (PTA), and caloric test on postmenopausal women who suffered from MD or not at the Specialist Clinic of Vertigo, Shandong Provincial Hospital, during September 2010 to October 2014. RESULTS: A total of 76 postmenopausal patients with MD and 50 healthy postmenopausal controls were included. The patients with MD had lower estrogen levels (22.50 ± 16.66 pg/mL vs 30.69 ± 18.59 pg/mL, P = 0.011), longer I-V interpeak latency of ABR (left 0.22 ± 0.16 milliseconds vs 0.18 ± 0.10 milliseconds, P = 0.118; right 0.24 ± 0.13 milliseconds vs 0.17 ± 0.09 milliseconds, P = 0.001), and higher unilateral weakness (UW) value (P < 0.001) in comparison with the controls. The mean pure-tone thresholds of at the speech frequency (500 Hz, 1 kHz, 2 kHz, and 3 kHz) were significantly elevated in patients with MD than those in the controls (left P < 0.001, right P < 0.01). The estradiol level of patients with MD was correlated with ABR latency (left r = -0.229, P < 0.05; right r = -0.220, P < 0.05) and UW value (r = -0.328, P < 0.05), but not with mean pure-tone threshold. CONCLUSIONS: Estrogen levels correlated with auditory and vestibular function in postmenopausal patients with MD. Low estrogen may be involved in the microcirculatory disturbance of the inner ear, affecting the occurrence and development of MD.

Incidence of subsequent fractures in the UK between 1990 and 2012 among individuals 50 years or older.

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INTRODUCTION: Recent information on the risk of subsequent fractures after a broad range of index fractures in the UK population is scarce. We therefore studied the rates of subsequent fractures of the femur/hip, humerus, radius/ulna, vertebrae, rib, or pelvis after fractures at one of these sites from 1990 to 2012 in 3,156,347 UK men and women aged 50 years or over. METHODS: We undertook a retrospective observational study using the UK Clinical Practice Research Datalink (CPRD). The incidence of subsequent fractures at a specific site was calculated by dividing the observed number of fractures by the number of person-years (py) at risk. The relative risk (RR) of subsequent fractures after a femur/hip fracture, by 5-year age band, was calculated by dividing the incidence of a specific subsequent fracture type by the incidence of first fractures at the same site in the same age group. RESULTS: The highest subsequent fracture incidence after a femur/hip fracture was for humerus fracture in men (59.5/10,000 py) and radius/ulna fracture in women (117.2/10,000 py). After an index fracture of the radius/ulna, humerus fracture in men (59.3/10,000 py) and femur/hip fracture in women (82.4 per 10,000 py) were most frequent. The RR of fractures after a femur/hip fracture ranged from 2 to 7 and were highest in men and younger age groups. CONCLUSION: Patients suffering a fracture have a high incidence of a subsequent fracture. Our findings demonstrate the importance of fracture prevention in patients with a history of a fracture by adequate medical diagnosis and treatment.

Changes in carotid artery intima-media thickness 3 years after cessation of menopausal hormone therapy: follow-up from the Kronos Early Estrogen Prevention Study.

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OBJECTIVE: Little is known regarding the progression of preclinical atherosclerosis upon cessation of menopausal hormone therapy (MHT). This study evaluated changes in carotid artery intima-media thickness (CIMT) in a subgroup of participants during 4 years and 3 years after the Kronos Early Estrogen Prevention Study (KEEPS).

METHODS: Of the women enrolled in KEEPS at Mayo Clinic (n=118), a subset (n=76) agreed to participate in this follow-up study. KEEPS MHT assignments were placebo (PBO), n=33; transdermal 17β-estradiol (tE2), n=23; and oral conjugated equine estrogens group (oCEE), n=20. CIMT was measured by B-mode ultrasonography. Longitudinal analysis of CIMT was performed using all available data from pre-, on-, and post-treatment periods.

RESULTS: At 7 years, median age of participants was 60.2 years; median time since menopause was 8.5 years. The mean difference in rates of increase was significantly greater over the post- than on-treatment period within the oCEE group (0.010 [0.002-0.017] mm/y), but not within the PBO (0.006 [-0.001 to 0.012] mm/y; P=0.072) or tE2 (0.002 [-0.005 to 0.010] mm/y; P=0.312) groups. There were, however, no significant treatment differences in the linear trends over those intervals (P=0.524). CONCLUSIONS: Cessation of MHT at the lower doses and formulations used in KEEPS did not appear to alter the trajectory of CIMT over a 3-year follow-up period. CIMT, however, increased in all groups over the entire 7-year timeframe as expected with age and timing of menopause possibly key contributors.


Clinical aspects of thyroid function during ageing.
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Globally, populations are ageing at a rapid rate. The increase in the number of older citizens is accompanied by an increased prevalence of thyroid dysfunction, one of the most common disorders in older people. However, the diagnosis of thyroid dysfunction in older people is hindered by several factors, including the scarcity of thyroid dysfunction symptoms in older people. We describe the physiological changes in thyroid function that occur with increasing age, focusing on literature regarding changes in thyroid function test results in older populations. We also discuss treatment considerations for clinical and subclinical thyroid dysfunction according to international guidelines for older people. Finally, we discuss the relationship between variations in thyroid function and common diseases of old age including cardiovascular disease, osteoporosis, cognitive impairment, and frailty and suggest directions for future research.


Role of musculoskeletal disorders in falls of postmenopausal women.
PURPOSE: Falls are a major public health problem worldwide. The aim of the study was to investigate the role of MSDs as risk factors for falls among postmenopausal women. METHODS: This cohort study utilized data from a population-based, prospective cohort study (OSTPRE). The study population consisted of 8656 women aged 57-66 years (in 1999) living in Kuopio Province, Eastern Finland, who responded to postal enquiries in 1999 and 2004. Information on MSDs and other morbidities was obtained from the 1999 enquiry and information on falls from the 2004 enquiry. Women were classified as fallers or non-fallers according to their falling events in the preceding 12 months. The fallers were further divided into women with slip and nonslip falls. RESULTS: Of the study sample, 53.3% reported a MSD and 39.2% reported a fall during the preceding 12 months. MSDs predicted falls (OR = 1.38; 95% CI 1.26-1.50) and the association was stronger for nonslip (OR = 1.56; 95% CI 1.39-1.75) than slip falls (OR = 1.22; 95% CI 1.08-1.38) compared to the women without MSDs. The risk of falls increased with increasing number (1, 2, ≥3) of MSDs: 1.25 (95% CI 1.13-1.38), 1.48 (95% CI 1.30-1.68), and 1.92 (95% CI 1.60-2.31), respectively. After adjustments, the risk of falling related to MSDs reduced by about 5% (adjusted p < 0.001). The population attributable fraction of falls due to MSDs was 10.3% of all falls, greater than that due to any other disease class. CONCLUSION: MSDs are common and an important risk factor for falls and especially nonslip falls among postmenopausal women. The number of excess falls due to MSDs in this population group is greater than that due to any other disease class.


Fracture risk after gastric bypass surgery-a retrospective cohort study.
Axelsson KF, Werling M, Eliasson B, Szabo E, Näslund I, Wedel H, Lundh D, Lorentzon M.
Gastric bypass surgery constitutes the most common and effective bariatric surgery to treat obesity. Gastric bypass leads to bone loss, but fracture risk following surgery has been insufficiently studied. Furthermore, the association between gastric bypass and fracture risk has not been studied in patients with diabetes, which is a risk factor for fracture and affected by surgery. In this retrospective cohort study using Swedish national databases, 38,971 obese patients undergoing gastric bypass were identified, 7758 with diabetes and 31,213 without. An equal amount of well-balanced controls were identified through multivariable 1:1 propensity score matching. The risk of fracture and fall injury was investigated using Cox proportional hazards and flexible parameter models. Fracture risk according to weight loss and degree of calcium and vitamin D supplementation one-year post-surgery was investigated. During a median follow-up time of 3.1 (IQR 1.7-4.6) years, gastric bypass was associated with increased risk of any fracture, in patients with and without diabetes using a multivariable Cox model (HR 1.26, 95% CI 1.05-1.53 and HR 1.32, 95% CI 1.18-1.47, respectively). Using flexible parameter models, the fracture risk appeared to increase with time. The risk of fall injury without fracture was also increased after gastric bypass. Larger weight loss or poor calcium and vitamin D supplementation after surgery were not associated with increased fracture risk. In conclusion, gastric bypass surgery is associated with an increased fracture risk, which appears to be increasing with time and not associated with degree of weight loss or calcium and vitamin D supplementation following surgery. An increased risk of fall injury was seen after surgery, which could contribute to the increased fracture risk.