Background: Among adults, prevalence of sleep disorders in women aged 25-64 years was 64.9%. Women with cerebrovascular disease at the baseline were not included in the four groups. Depending on the age groups the risk of stroke incidence was highest in group of 45-59 years, 1.95-fold risk of stroke (95.0%CI: 1.01-3.79; P < 0.05); (5) in October 16, 2013 to December 31, 2012, women were followed for 16 years for the incidence of stroke. Women with cerebrovascular disease at the baseline were not included in the four groups. Finally, we concluded that the temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases. The temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases. The temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases.

Conclusions: This study showed that Hcy lever was associated with TC and LA (r = 0.211, P < 0.05), and Hcy levels in RA patients was in normal range; (3) lipid levels: RA group TC, LDL-C and Apo-a levels were higher than those of OA group (4.45 ± 1.14 mmol/l vs 4.43 ± 1.19 mmol/l, P < 0.05; 3.05 ± 0.94 mmol/l vs 2.94 ± 0.88 mmol/l, P < 0.05; 0.05 ± 0.04 mmol/l vs 138.86 ± 28.38 mmol/l, P < 0.01), HDL level was lower than that of OA group (1.26 ± 0.27 mmol/l vs 1.36 ± 0.32 mmol/l, P < 0.05); (4) echocardiography: aortic diameter was higher in RA group than that in OA group (32.09 ± 2.52 mm vs 31.44 ± 2.67 mm, P < 0.05), while ejection fraction (EF%), diastolic dysfunction (LVFP), and tissue disease, ruled with severe hypertension, diabetes and other metabolic disorders and inflammatory responders. The prevalence of SD in women aged 25-64 years was 64.9%.

Methods: A total of 139 elderly essential hypertensive patients (106 males and 33 females, aged 84.04 ± 4.77 years) underwent twice 24-hour ABPM within 4 weeks, and were divided into three groups according to the circadian pattern of blood pressure: reproducible dippers group (18 cases), reproducible non-dippers group (99 cases), variable-dippers group (22 cases). The prevalence of SD in women aged 25-64 years was 64.9%.

Conclusions: The relationship between 48h blood pressure circadian rhythms and cognitive function in elderly hypertensive patients Gao Congcong, Huang Gaozhong

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Objectives: To determine the effect of sleep disturbances (SD) on health behavior and relative risk of stroke in female part of population aged 25-64 years depending on social gradient in Russia over 16 years of follow-up. The prevalence of SD in women aged 25-64 years was 64.9%.

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GW25-e2127

The relationship between 48h blood pressure circadian rhythms and cognitive function in elderly hypertensive patients Gao Congcong, Huang Gaozhong

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GW25-e3587

Long-term risk of stroke in female part of general population aged 25-64 years with sleep disorders in Russia: based on MONICA-psychosocial epidemiological study

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Objectives: To determine the effect of sleep disturbances (SD) on health behavior and relative risk of stroke in female part of population aged 25-64 years depending on social gradient in Russia over 16 years of follow-up. Valentine Gafarov1,2, Dmitriy Panov1,2, Elena Gromova1,2, Igor Gagulin1,2, Almira Gafarov1,2

GW25-e1380

Association of Temperature with Cerebrovascular and Cardiovascular Diseases in Beijing in the Context of Climate Change

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Objectives: Firstly, to elucidate the relative importance of temperature on human health. Second, to interpret the importance of temperature variation with respect to observed Cardiovascular and Cerebrovascular diseases. Thirdly, to estimate the direct effects of temperature on local people in some big cities.

Methods: Data from the meteorological database of China Meteorological Administration was selected and the temperature configurations in term of daily maximum and minimum temperature, daily mean temperature, and daily temperature difference from January 1 to December 31 of 2012 were analyzed. The data set of cardiovascular and cerebrovascular diseases including the daily myocardial infarction (ICD: 21-22) and cerebral infarction (ICD: 63) were chosen from a class-A hospital in Beijing, totally amounting to 12933 cases. Four patient groups including under the age of 44, 45-59, 60-74 and over 75 years old were analyzed by the aid of sps17.0.

Results: We found that the number of male cardiovascular and cerebrovascular patients was more than the number of female patients in the four groups, with the exception of female Cardiovascular and Cerebrovascular patients showed a peak within the group of 60-74. The temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases. The temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases. The temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases. The temperature factor, to certain content, induced some effects on cardiovascular and cerebrovascular diseases.
GW25-e3131
Effect of Blood Pressure Variability on Cardiovascular Outcome in Diabetic and Nondiabetic Patients with Stroke
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Objectives: The association between blood pressure (BP) variability and prognosis of stroke is controversial. Some studies indicated that diabetes was related with BP variability. However, there are few studies focusing on BP variability of diabetic patients with stroke. So we aimed to examine the impact of BP variability on cardiovascular outcome by ambulatory BP monitoring (ABPM) in diabetic and nondiabetic patients with stroke.

Methods: The 373 patients with ischemic stroke were recruited and followed up. All patients were performed the ABPM and divided according to the 25th and 75th percentiles interval of SD of daytime systolic BP (SBP). Kaplan-Meier analysis and Cox regression were used to assess the relationship between BP variability and cardiovascular outcomes including stroke recurrence, combined vascular events and cardiovascular death in diabetic and nondiabetic patients with stroke.

Results: The 339 patients were included in the final analysis. During an average follow-up of 19.0±5.1 months (0.6-26.8 months), 69 (20.4%) cardiovascular events occurred in all enrolled patients. Kaplan-Meier analysis found that there were no differences in cardiovascular events-free survival among the different BP variability groups in all patients (log-rank χ²=1.974, P=0.373) and diabetic subgroup (log-rank χ²=0.010, P=0.995), however, nondiabetic patients who had a higher BP variability showed a lower cardiovascular events-free survival (log-rank χ²=6.466, P=0.039). Cox regression indicated that age (HR, 1.040; 95% CI 1.002-1.079), functional status score (HR, 1.089; 95% CI 1.024-1.158), SD of daytime SBP (HR, 1.103; 95% CI 1.011-1.203) were associated with cardiovascular outcomes in nondiabetic patients with stroke.

Conclusions: We show that SBP variability is associated with cardiovascular outcomes in stroke patients with diabetes maybe because there lies in a deranged autonomic dysfunction and/or an increased arterial stiffness in diabetic patients.

GW25-e3182
Research on Mechanism of Salvianolic Acid B Intervening in Rats with Cerebral Ischemia Reperfusion Injury in Rats
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Objectives: To research the effect and mechanism of salvianolic acid B (SaB) intervention in rats with cerebral ischemia reperfusion injury.

Methods: Wistar rats were randomly divided into sham operation group, model group and SaB groups. Rat Ischemia-reperfusion injury model was established by MCAO 1h and reperfusion. Low, medium and high dose SaB (3mg/kg, 6mg/kg, 12mg/kg) or saline (solvent group) were administered intraperitoneally while rats were awake from sacrifice to 48h after reperfusion. At 4 different time points (6h, 24h, 48h, 72h after reperfusion), the neurological deficit scores were evaluated, while HE staining for brain tissue morphology observation, automatic blood cell analyzer detection for peripheral blood white blood cell, absolute neutrophil count, ELISA for plasma CRP, sFlt-1, MCP-1, IL-1 receptor, real-time fluorescence quantitative RT-PCR detection for brain tissue inflammatory cytokine ICAM-1, E-selectin, IL-1beta, IL-6, CINC-1, MCP-1 mRNA expression and immunohistochemical detection for NF kappa Bp65 expression were also used.

Results: SaB could improve MCAO rat neurological function and the reduction of peripheral blood white blood cell count, absolute neutrophil count, plasma CRP, sP-selectin and sCD40L concentration, depress inflammatory cytokines including ICAM-1, E-selectin, IL-1β, IL-6, CINC-1, MCP-1 mRNA expression and NF-kB activation in cerebral tissue, and 12mg/kg SaB had obvious dose advantage. Conclusions: Salvianolic acid B has anti-inflammatory effect and the mechanisms were related to the action of inhibiting platelet activation, attenuating the overall and cerebral local inflammatory responses, blocking NF-kBp65 activation pathway.

GW25-e5321
Circulating microRNAs as the novel biomarkers for the monitoring and assessment of ischemic stroke
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Objectives: To determine serum distinctive microRNAs (miRNAs) in ischemic stroke patients to evaluate its potential monitoring and assessment ischemic stroke.

Methods: A total of 227 ischemic stroke, 30 cerebral hemorrhage patients and 92 healthy controls were enrolled. All the ischemic stroke patients were categorized according to their different onset time and National Institutes of Health Stroke Scale (NIHSS), respectively. TaqMan Low Density Arrays were applied to preliminary screening of miRNAs expression profiles in mixed serum samples from 50 ischemic stroke patients and 48 healthy controls. Quantitative real-time polymerase chain reaction (qRT-PCR) assays were employed to validate and confirm distinctive serum miRNAs first in the same cohort of microarray analyses and further in a large-scale cohort. Serum candidate miRNAs levels in ischemic stroke patients at different time points after medical treatment were also studied. The inflammatory mediators and lipid/lipoprotein profiles were determined. The correlation analyses and logistic regression analyses were performed, respectively.

Results: Compared with the controls, relative levels of serum miR-23b, miR-29b, miR-21 were found significantly increased in ischemic stroke patients (miR-23b: 1.0±0.07 vs. 2.15±0.21, P<0.0001; miR-29b: 1.0±0.08 vs. 1.98±0.29, P<0.0001; miR-21: 1.0±0.06 vs. 1.87±0.11, P<0.0001) and miR-23b levels were also elevated in acute stroke patients (miR-23b: 1.0±0.07 vs. 1.73±0.18, P=0.0199). Serum levels of miR-23b, miR-29b, miR-21 in no-acute ischemic stroke patients (n=107, onset time>48h) were significantly higher than in acute stroke patients (n=120, onset time<48h) (miR-23b: 2.43±0.28 vs. 1.96±0.19, P=0.027; miR-29b: 2.09±0.30 vs. 1.63±0.19, P=0.007; miR-21: 2.01±0.29 vs. 1.58±0.18, P=0.036), while their levels between severe (n=114, NIHSS>7) and mild (n=113, NIHSS<7) stroke patients exhibited no significance (P=0.05). Serum levels of miR-23b, miR-29b and miR-21 showed a significantly increasing trend in ischemic stroke patients after hospitalization, of which, their levels reached a peak at 10-18 days after medical treatment (P<0.05). The up-regulation of 3 miRNAs was strongly correlated with abnormal inflammatory mediators and lipid/lipoprotein parameters in ischemic stroke patients. Logistic regression analyses revealed that these distinctive miRNAs were closely associated with the presence of ischemic stroke and also applied to the differentiation of acute and sub-acute stroke.

Conclusions: Serum miR-23b, miR-29b, miR-21 were significantly increased in ischemic stroke patients and may be the novel biomarkers for the monitoring and assessment of ischemic stroke.

GW25-e1494
Microarray analysis of gene expression in homocysteine injured human umbilical vein endothelial cells
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Objectives: To identify key genes differentially expressed in the human umbilical vein endothelial cells (HUVECs) injured by homocysteine and explore their functions.

Methods: Primary HUVECs were cultured with or without homocysteine. The total RNA was isolated from the cells with Trizol method. After purification, reverse transcription was carried out to synthesize Cy3/Cy5 labeled cDNA probe. The probe was hybridized with microarray based Affymetric high throughput gene expression profile (47, 000 genes or gene fragments) to screen the differentially expressed genes among these groups. The effect of homocysteine on the biological function of HUVECs and the possible signal pathway were analyzed.

Results: Among 47000 gene clones on the microarray, 4659 (9.91%) genes were detected to have the marked changes with 4343 up-regulated and 316 down-regulated by homocysteine. Through biological function and pathway analysis using Gene Ontology (GO) database, gene clusters involved in transcription activators, protein biosynthesis, cell adhesion molecule and metabolism. According to the Kyoto Encyclopedia of Gene and Genomics (KEGG), homocysteine played roles in certain pathways related to the vascular proliferation, apoptosis, oxidative stress, coagulation and fibrinolysis, inflammation, such as mTOR, MAPK, NF-kB, P38/AKT, Toll-like receptor signaling pathways. Conclusions: Homocysteine can alter the gene expression profiles of HUVECs, leading to change of cell immune, inflammatory and apoptosis responses.

GW25-e5356
The analysis of the relationship between coronary artery stenosis and cerebral vascular stenosis
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