The Study on Burden and Influence Facts in Heart Failure Family Caregivers

GW25-e5198

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Objectives: Discuss family caregiver’s burden and influence facts of heart failure patients. To present corresponding measures and solution in order to reduce patients’ burden and enhance congestive heart failure patients’ living quality.

Methods: The research objects are 120 patients with heart failure in hospital who had met the standard of first hospital Geriatrics of Jilin University during May 2013 to December 2013. Adopts the method of questionnaire survey, to understand the basic condition of the heart failure patients and their family caregivers through general information, to assess the Burden of Family Caregivers of patients with heart failure. Through the caregiver Burden questionnaire (Caregivers Burden Inventory CBI). By using SPSS13.0 software package, to make the descriptive statistical analysis of the questionnaire result, correlation analysis, etc.

Results: (1) Score distribution of the burden of Heart failure patients’ family care- givers scope in 1-69, an average of score were 26.53 and 16.70, five dimensions of the highest burden scores were time dependency burden and limited development burden, followed by the physical burden, the lowest were social burden and affective burden. (2) Caregivers of patients gender, age, patients age, illness age, culture and medical payment way had an impact on the burden of caregivers.

Conclusions: By improving the knowledge of the caregivers of heart failure, medical personnel should establish corresponding propaganda, education and follow-up visit system, reduce the burden of caregivers.

Analysis for the security management of radial artery after PCI

GW25-e3546

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Objectives: To explore the effects of monitoring postoperative transcutaneous oxygen saturation in preventing radial artery occlusion after PCI treatment.

Methods: 285 patients who underwent PCI via radial artery from January to March in 2014 were randomly divided into clinical groups (n=143) and the control group (n=142). Make sure the Allen test of the operation side was negative preoperatively, and no special discomfort was observed after surgery. Press the ulnar artery for 30 seconds, and simultaneously measure the blood oxygen saturation of the operation side. Clinical group: radial artery hemostat decompression was given after observation of spO2 was less than 95%, until the blood oxygen saturation rose to 10%. Both groups were categorized into four groups (depression-hypertension, nondepression-hypertension, depression-no hypertension, nondepression-no hypertension) according to their depression scores and blood pressure levels. DNA was extracted from peripheral white blood cell and methylation levels of 9 CpG sites in NET gene promoter region were investigated using pyrosequencing. Methylation differences between groups were analyzed using Analysis of Variance. Multiple regression models were fitted to adjust for the potential confounding effect. The Spearman’s correlation coefficients, principle component analysis (PCA) and hierarchi- cal clustering analysis (HCA) were used to explore the relationship among CpG sites.

Effect of Continuous Nursing Intervention on Quality of Life in Elderly Patients with Chronic Diseases

GW25-e4488

GW25-e5121

Role of DNA Methylation in NET Gene Promoter Region on the Association between Depression and Hypertension

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Objectives: Depresssion has been demonstrated to be associated with hyperten- sion. Increased sympathetic nervous system activities, usually measured as norepinephrine (NE) levels, and decreased NE transporter (NET) function, are thought to be plausible for the depression-hypertension association, through epigenetic modification. The present study aims to detect the role of DNA methylation in NET gene promoter region on the association between depression and hypertension.

Methods: One hundred and sixty-two subjects, with no history of diabetes, stroke and coronary heart disease and matched for smoking, drinking and physical activity, were categorized into four groups (depression-hypertension, nondepression-hypertension, depression-nonhypertension and nondepression- nonhypertension) according to their depression scores and blood pressure levels. DNA was extracted from peripheral white blood cell and methylation levels of 9 CpG sites in NET gene promoter region were investigated using pyrosequencing. Methylation differences between groups were analyzed using Analysis of Variance. Multiple regression models were fitted to adjust for the potential confounding effect. The Spearman’s correlation coefficients, principle component analysis (PCA) and hierarchi- cal clustering analysis (HCA) were used to explore the relationship among CpG sites.
Results: DNA methylation levels of the CpG sites adjacent to transcription start site tended to be low (CpG1: 51.32%, CpG2: 53.24%, CpG3: 40.71%, CpG4: 24.41%, CpG5: 13.80%, CpG6: 10.00%, CpG7: 15.53%, CpG8: 6.04%, CpG9: 15.12%). For each CpG site and the average value of 9 CpG sites, methylation levels were lower (except for CpG2) in other three groups, compared with nondepression-non-hypertension group, but not statistically significant. Multiple regression analysis indicated no significant differences among different groups after controlling for age and BMI. Spearman’s correlation coefficients and PCA found that CpG5-9 and CpG4 are highly representative by the first principle component, while CpG2 had a big loading on the second principle component and CpG1, CpG3 land in between. HCA showed that all patients may be clustered into three subgroups, in which the samples from all hypertension and depression combinations were mixed. Therefore, using the methylated levels on these 9 CpG sites, we cannot discriminate these four groups apart.

Conclusions: The present study firstly detects the role of epigenetics on the depression-hypertension association and finds that there are no significant differences in DNA methylation levels in NET gene among groups. Further studies should take into consideration the role of methylation in other CpG sites and other potential epigenetic mechanisms in the regulation of NET gene on the association between depression and hypertension. Furthermore, studies with prospective design or studies conducted in cell lines or animal models with interventions are needed for mechanism research.

GW25-e2431
Mental health surveys among the hospitalized patients with atherosclerotic cardiovascular disease at Department of Cardiology
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Objectives: While mental health problem, such as depressions often co-occur with heart disease, less is known about the prevalence and really clinical diagnosis or treatment status of anxiety or depression in patients with atherosclerotic cardiovascular disease (ASCVD). The aim of the study was to investigate the prevalence and the real world status of diagnosis and treatment of anxiety /depression disorders in those with ASCVD who admitted at department of cardiology. This is useful to lay the foundation for a better management of patients with the comorbidity of mental disorders and heart disease.

Methods: 292 men and 158 women from inpatients of department of cardiology between October 2013 and February 2014 were assessed for ASCVD. Anxiety and depressive symptoms were measured using face-to-face interviews with the Hospital Anxiety and Depression Scale (HADS) during the period of hospitalization. The initial medical history about the diagnosis and treatments of anxiety or/and depression were looked up.

Results: (1) Out of 450 patients, 204 (45.3%) patients were diagnosed with anxiety or/and depression. The most prevalent psychological disorder was only anxiety (112 cases, 24.9%), followed by only depression (50 cases, 11.1%), and comorbidity of anxiety and depression (42 cases, 9.3%). The mean HAD-A score for 154 patients with anxiety was 24.45 [P = < 0.002], age (40-60 year old) [OR = 1.54, 95% CI 1.15-2.07, P = 0.004], severe diabetes [OR = 1.62, 95% CI 1.34-1.96, P = 0.001] were significantly associated with incidence of anxiety or/and depression respectively. (2) Out of 204 ASCVD patients with anxiety or/and depression, only 25 cases (12.6%) were diagnosed with anxiety or/and depression , and only 23 (11.1%)cases were treated with anti-anxiety or depression drugs at initial medical history. The most frequent drug was vitamin (10 cases, 43.4%), then Traditional Chinese Medicine(6 cases, 26.0%), benzodiazepines (4 cases, 17.3%), flupentixol and melitracen(2 cases, 8.6%), and mirtazapine(1 case, 4.3%). (3) Twenty-two physicians who majored cardiology conducted questionnaire investigation about diagnostic standard and treatment of anxiety or depression disorders. The correct answer rates for 10 (45.4%) physicians were lower than 60%, 8 physicians between 60-80%, and 4 physicians higher than 80%. Only 2 physicians presented 100% of correct answers.

Conclusions: Anxiety / depression disorders is common in those with ASCVD. While mental health problem, such as depressions often co-occur with heart disease, less is known about the prevalence and really clinical diagnosis or treatment status of anxiety or depression in patients with atherosclerotic cardiovascular disease (ASCVD). The aim of the study was to investigate the prevalence and the real world status of diagnosis and treatment of anxiety /depression disorders in those with ASCVD who admitted at department of cardiology. This is useful to lay the foundation for a better management of patients with the comorbidity of mental disorders and heart disease.

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GW25-e1680
Gender Difference In Anxiety For The First Blood Transfusion: Result Of A Single Center
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Objectives: Blood transfusion has several risks including allergic reaction, acute hemolysis, infectious disease and so on. Both physicians and patients are always cautious to decide on blood transfusion. The purpose of this study was to explore whether there are gender difference in anxiety for the first blood transfusion in patients with different diseases.

Methods: 315 patients (153 men and 162 women )were enrolled in this prospective, comparative study and median age was 38 years(range 17-72). The disease consisted of 85 chronic hepatitis B, 73 leukemia, 69 gastric ulcer, 48 chronic renal failure and 48 gynecological oncology. Various blood products including plasma, red blood cells suspension and platelet were infused. Anxiety was evaluated by patients’ clinical symptoms during the first blood transfusion.

Results: For the patients with same disease, women had higher anxiety levels than men during the first blood transfusion [(0.83 ±0.60) vs (0.55 ± 0.70), P<0.05].

Conclusions: Women were more anxious than men during the first blood transfusion and this relationship is independent of age, race, education level and kinds of blood product.

Cardiac Cath Lab Technology

GW25-e0159
The effect of right ventricular pacing on aortic regional pressure: An animal study
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Objectives: To determine the variation of aortic regional pressure at different pacing rates in right ventricle.

Methods: A group of 10 healthy adult goats were selected for the study. Under general anesthesia, pacing rate was increased from 150 to 350 beats/min with increment of 25 beats/min. Systolic, diastolic and mean aortic pressure were determined at different pacing rate with an external pacemaker. Then the pressure gradients were figured out.

Results: The systolic supravalvular aortic pressure and systolic transvalvular aortic pressure gradient pressure curve was decreased with the pacing rate increase. The diastolic transvalvular aortic pressure gradient curve was elevated with the pacing rate increase. However, the diastolic supravalvular aortic pressure gradient curve was similar to an irregular parabolic curve.

Conclusions: Pacing in right ventricular apical results in decline in aortic pressure. And for goats, the appropriate pacing frequency that reducing the transvalvular pressure gradient effectively with less danger was 250-300 beats/min.