GW23-e2297 **SERUM EXPRESSION LEVELS OF GDF-15 IN PATIENTS WITH CAD**

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Objectives

1. To determine the serum expression levels of GDF-15 in peripheral blood among Group STEMI, NSTEMI, UA, CAD, non-CAD by ELISA.
2. To investigate the relationships between GDF-15 and severity/characteristics of coronary artery lesions.
3. To investigate the relationships between CDF-15 and hsCRP & left ventricular function.
4. To evaluate whether GDF-15 could be an index of efficacy and prognosis post PCI therapy for Acute Coronary Syndrome.

Methods

1. After informed consent was obtained, 200 patients with coronary artery diseases (according to the conditions on admission, the patients were divided into Group STEMI, NSTEMI, UA and SA) and 100 patients with normal coronary arteries were collected form 2010 - 2011 in Cardiovascular Medicine Department of the People's Hospital of Haikou City, all of the cases were confirmed by coronary arteriongraphy. The clinical characteristics and ECG findings on admission were recorded.
2. The severity of coronary artery lesions were assessed by Gensini scores. The left ventricular ejection fraction was determined by echocardiogram.
3. The levels of GDF-15, hs-CRP on admission were determined by ELISA, and for patients receiving PCI therapy for Acute Coronary Syndrome, the serum GDF-15 level was determined 1, 3, and 12 months post discharging.
4. The SPSS14.0 software was used for data analysis.

Results

1. There was statistically significant difference in GDF-15 between Group CAD and non-CAD.
2. There was statistically significant difference in the serum expression level of GDF-15 between Group SA and ACS.
3. There was statistically significant difference in the serum expression level of GDF-15 between Group STEMI/NSTEMI and UA.
4. The serum level of GDF-15 was positively correlated to the numbers of coronary artery branches involved in CAD (1, 2, or 3 branches).
5. The serum level of GDF-15 was positively correlated to the severity (Gensini scores, divided into 3 categorisations: <=20; <20–40 <=;>40) of artery lesions.
6. The serum concentration of GDF-15 was positively correlated to the high-sensitivity C-reactive protein (hsCRP) in CAD group.
7. The serum concentration of GDF-15 was negatively correlated to LVEF in CAD group.
8. The PCI therapy group was followed up, and the serum GDF-15 was rechecked 1, 3, and 12 months later, it was seen that the GDF-15 level was significantly decreased post therapy, while it remained high in patients who experienced end-point events. So, the GDF-15 could serve as a serological index of efficacy and prognosis (compared with the GDF-15 level on admission).

Conclusions

1. The GDF-15 level was 366.67±261.36 ng/l in non-CAD group, 766.29±171.62 ng/l in CAD group, 629.84±136.30 ng/l in SA group, 821.13±196.20 ng/l in ACS group, 718 ±112.70 ng/l in STEMI group, 625.85±108.50 ng/l in NSTEMI group and 580±196.90 ng/l in UA group.
2. The more the GDF-15 level elevated, the more the coronary artery branches were involved.
3. The more the GDF-15 level elevated the severer the coronary artery branches being.
4. The serum concentration of GDF-15 was positively correlated to the high-sensitivity C-reactive protein (hsCRP) in CAD group.
5. The serum concentration of GDF-15 was negatively correlated to LVEF in CAD group.
6. The serum GDF-15 level could serve as a serological index of efficacy assessment post PCI therapy, and be of certain prognostic values in Acute Coronary Syndrome patients.