Early Warning of Acute Aggravation in Discharged Patients with Chronic Heart Failure*

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Objective

To explore the early warning of acute aggravation in discharged patients with chroninc heart failure. Methods Patients of chronic heart failure with reduced effection fraction (HFrEF) were selected from consecutive cases discharged from Songshan hospital in 2016 to 2020. A follow-up table of integrals (EWI, early warning Integral) according to the ralative factors of pathogenesis, inducement, EF, early sympotum, early sign and BNP level was designed to investigate retrospectivly the latest acute aggravation before hospitalization. Logistic regresion was used to define early warning factors and their judgement criterium. Results Altogether 100 patients were selected from 105 consecutive discharged patients. Male/female was 46/54 with age 63.5±7.6 years and EF 41.3±5.2%. Annual hospitalization was 1.8±0.7 times. All patients complicated with organic heart disease and most of them were atrial fibrillation, hypertension, coronary heart disease and degenerative valvular disease (18%-56%). Regression showed that early acute aggravation was significantly related to pathogenesis 0.89, EF0.87, overwork 0.83, aggravated edema 0.72, shortness of breath 0.68, declined activity 0.56 ($P<0.05$-0.01). EWI was designed according to 2 major factors (organic heart disease and reduced EF 2 scores in each) and at least 1/4 minor factors (overwork, aggravated edema, shortness of breath, declined activity 1 score in each). A score larger than 5/8 suggests strongly high risk of early acute aggravation of chronic HFrEF. Subsequent BNP tests were positive in the whole group of patients.

Conclusions

Discharged patients with chronic HFrEF exist identifinable sigh of early warning. EWI could be used to find their early acute aggravation. Defined diagnosis could be made by subsequent BNP test.

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