Prevalence of perceived depressive symptoms and its association with stages of heart failure of outpatients in a public hospital in Malaysia

Jing Ng1*, Fatimatuazzahra Abdul Aziz2, Sabariah Noor Harun1, Balamurugan Tangiisuran1, Muhamad Ali SK Abdul Kader2

1 School of Pharmaceutical Sciences, Universiti Sains Malaysia, Pulau Pinang, Malaysia
2 Department of Cardiology, Hospital Pulau Pinang, Pulau Pinang, Malaysia

Introduction
• Heart failure affects 23 million people globally.
• A complex clinical syndrome that leads to hospitalization, readmission, and mortality.
• Non-cardiac comorbidities (i.e., depression) are associated with higher risk for hospitalization and mortality (1).
• Systematic review: higher depression rate among New York Heart Association (NYHA) class IV patients than class I (42% vs 11%) (2).
• Importance of detecting depressive symptoms its association with HF disease state.
• However, relevant local studies within Malaysia were limited.

Method

Design and Setting
• A cross-sectional survey
• Heart Failure Clinic in Hospital Pulau Pinang (HPP)

Participants
Excluded:
• Patients who refused
• Under 18 years old
• Pregnancy
• Patients with psychiatric or depressive disorders
• Inpatients

Study instrument and procedure
• Patient-Health Questionnaire-9 (PHQ-9).
• English and Malay version
• Validated for depressive symptoms screening.
• 9 questions
• Four (4)-point scale, each indicating the frequency of encountering the problems for the past two weeks.
• Total score ≤10 was non-depressive whereas ≥10 was depressive.
• After obtaining signed informed consent, each participant was given a questionnaire.
• Clinical characteristics of patients were retrieved from outpatient medical record files.

Statistical analysis
• Results were reported in percentage (%) or median ± interquartile range (IQR).
• Fisher’s exact test with 95% confidence interval and Spearman correlation were used.
• A value of P < 0.05 was considered statistically significant.

Results
• Total participants recruited: 177 patients
• Median age ± IQR: 62 years ± 17 years
• Prevalence of perceived depressive symptoms: 14.1% (Figure 1).

• Increasing depressive rate with worsening heart function (Figure 2).

Discussion
• Depression prevalence rates for HF patients in previous studies varied from 9% to 60% (2).
• Differences in depression assessment methods and diagnostic thresholds (cutoff points) being applied (2).
• Possibility of overdiagnosis when using Diagnostic Interview Schedule (DIS) (3).
• Beck Deck Inventory (BDI) questionnaire with cutoff point ≥ 10 (4) might include patients with mild to severe depression.
• Cutoff point of 10 in PHQ-9 reflects to only moderate to severe depression (5).
• NYHA class is associated with depressive status and is consistent with previous results (2,4,6).
• Higher NYHA class indicates a greater reduction of cardiopulmonary function, therefore greater degree of functional impairment.
• Such disability reduces quality of life and increases mental stress.

Limitation
• Response bias due to variances in education level.
• Unequal patient distribution. Only one patient in NYHA class IV in current study.
• History of hospitalization and other environmental factors were not considered.

Conclusion
• Depressive symptoms were common among heart failure outpatients.
• Higher NYHA class suggested higher depressive symptoms score.
• Screening for perceived depression especially patients with higher NYHA class was recommended.

References