

Anxiety and Depression in Heart Failure Patients: A Prospective, Cross-Sectional Study

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Abstract

Introduction: Anxiety and depression are the two most common mental disorders among medically ill patients with prevalence of 10%-50%. Anxiety and depression are prevalent in patient with heart disease and are associated with high morbidity and mortality. This study aims to determine the prevalence of anxiety and depression and its correlation with clinical profile in heart failure patients using the Hospital Anxiety and Depression Scale Filipino Version (HADS-P).

Methods: A prospective cross-sectional study was conducted. HADS-P questionnaire was administered to heart failure patients admitted at the University of Santo Tomas Hospital from December 2013 to November 2014. After securing consent from the attending physicians and patients, the HADS-P questionnaires were then administered to the patients at the end of hospitalization by the investigator/s. The recommended cut-off score for HADS-P is score of 11. Chi-square and Independent T-tests were used in this study.

Results: 144 heart failure patients were enrolled in this study. The prevalence of depression and anxiety among heart failure patients is 13.2% and 25.7%, respectively. Having prior coronary angiography, coronary angioplasty, EF < 40%, and multiple co-morbidity diseases/s are significant factors for depression. While among patients with anxiety, the significant factor is the length of hospital stay.

Conclusion: This study shows that depression and anxiety are common among heart failure patients. Heart failure patients should be screened for depression and anxiety especially among those having above mentioned clinical profile. The HADS-P questionnaire is an easily applied screening method. A formal psychiatric referral can be taken and should be a part of the comprehensive management among heart failure patients with depression and anxiety.

Keywords: anxiety; depression; heart failure; cross-sectional; heart disease; hospital anxiety and depression scale; HADS

Introduction

Anxiety and depression are the most two common mental disorders among medically ill patients admitted in the general hospital with a reported prevalence of 10%-50%.¹ Anxiety and depression are prevalent in cardiac disease and are associated with increased morbidity and mortality.² Anxiety and depression coupled with heart disease triples the risk of death compared to cardiac disease alone.³

Depression and heart disease are very common and often co-exist; the prevalence of depression in various heart conditions ranges from 15-20%.^{4,5} According to data from the World Health Organization, by the year 2020 depression will be the second leading-cause of disability in developed countries (after heart disease).⁷ The world health survey showed that depression worsens health more than angina, arthritis, asthma or diabetes.⁸

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The 1996 Epidemiologic Catchment Area study found that people with major depression had a risk of MI four times higher than the normal, and people with two weeks of sadness or dysphoria had a risk two times higher.⁹ A subsequent meta-analysis of 11 studies, which included 36,000 patients, found that the overall relative risk of developing heart disease in depressed but healthy people was 1.64.¹⁰

A meta-analysis by Van der Kooy et al of 28 epidemiologic studies with nearly 80,000 patients showed depression to be an independent risk factor for cardiovascular disease.¹¹ Frasure-Smith et. al, in a landmark study, showed that patients who were depressed at one week after an MI were three to four times more likely to die in the next six months than nondepressed post-MI patients.¹² Even after 18 months, depression remained an independent risk factor for cardiac-related death.¹³

Clinical depression can worsen compliance with cardiac medication regimens and reducing depression increases medication adherence overall. Not surprisingly, depressed patients also adhere less well to other recommendations, including modifying the diet, exercising, stopping smoking, and attending cardiac rehabilitation programs.¹⁴

Traditional cardiac risk factors such as smoking, high cholesterol, hypertension, diabetes, and obesity tend to cluster in depressed patients. Other mechanisms linking depression and heart disease are as follows:¹⁴

1. Lack of variability in the heart rate which reflects a sympathetic-vagal imbalance and is a risk factor for ventricular arrhythmias and sudden cardiac death in patients with cardiovascular disease
2. Exaggerated platelet reactivity and activation which can lead to vascular damage and thrombosis
3. High plasma cortisol levels which can accelerate the development of hypertension and atherosclerosis and cause transient left ventricular dysfunction, even in patients without coronary disease
4. Higher inflammatory cytokines level which leads to damage to endothelial tissues and development of atherosclerosis.

The association between anxiety and heart disease has not been as fully studied as the relationship between depression and heart disease. However, Dr. Una McCann, Professor of Psychiatry and Behavioral Sciences, Johns Hopkins School of Medicine, believes the connection is strong. "It's my view and my personal clinical experience that anxiety disorders can play a major role in heart disease," says Dr. McCann. "I believe that a really careful look at anxiety would reveal the ways it can severely impact heart disease, both as a contributing factor and as an obstacle in recovery."¹⁵

When someone is anxious, their body reacts in ways that can put an extra strain on their heart. The physical symptoms of anxiety can be especially damaging among individuals with existing cardiac disease. Anxiety may have an association with the following heart disorders and cardiac risk factors:¹⁵

1. Tachycardia which can interfere with normal heart function and increase the risk of sudden cardiac arrest
2. Increased blood pressure which can lead to coronary disease and heart failure
3. Decreased heart rate variability which may result in higher incidence of death in cardiac patients

A simple method for recognition of anxiety and depression in the clinical setting therefore will be beneficial. Such information may be provided by a short questionnaire. The Hospital Anxiety and Depression Scale (HADS) (Appendix A-1) was developed by Zigmond and Snaith in 1983 to identify possible and probable of anxiety disorders and depression among patients in non-psychiatric hospital clinics.¹⁶ The HADS questionnaire has been widely used to screen depression and anxiety among cardiac patients in hospital. It is divided into an Anxiety subscale (HADS-A) and a Depression subscale (HADS-D) both containing seven intermingled items. All symptoms of mood disorder which are also likely to be present in patients with physical

illnesses such as insomnia and anorexia have been excluded, and a subsequent validation study shows that the scale distinguishes clearly between the concepts of depression and anxiety.¹⁷

"The validity of the Hospital Anxiety and Depression Scale", by Bjelland et al. done in 2001 in Norway, concluded that the HADS was found to perform well in assessing the symptom severity and caseness (possible and probable) of anxiety disorders and depression in both somatic, psychiatric, and primary care patients and in the general population.¹⁶ The advantages of the HADS are that it is short (14 items), acceptable to patients, can be easily completed in a "hospital waiting" room, and has been translated into all major European languages and many oriental languages and copies of translations are available.¹⁸

Each item which had been answered by the patient on a four point response category (0-3), the possible score ranges from 0 to 21 for anxiety and 0 to 21 for depression. In most studies, an optimal balance between sensitivity and specificity was achieved when caseness (probable and possible) was defined by a score of eight or above on both HADS-A and HADS-D. The sensitivity and specificity for both HADS-A and HADS-D of approximately 0.80 were very similar to the sensitivity and specificity achieved by General Health Questionnaire (GHQ).¹⁶ There were over 747 studies using the HADS in several clinical settings.¹⁶

There was local study done by Maria Rosanna De Guzman, M.D. The main objectives of this study is to determine the prevalence of anxiety and/or depression in the medically ill and to determine the validity of HADS Filipino Version (HADS-P) and the HADS-P optimal cut-off score for given a maximal diagnostic contribution by using the Receiver Operating Characteristic (ROC) curve. In this study, the prevalence of depression is 26.9%, anxiety is 14.3%, and 'mixed diagnosis' of depression and anxiety is 13.7%. In this study, the HADS-P was validated as a screening instrument given the different cut-off scores. The optimal cut-off score recommended for Filipinos is a HADS-P score of 11 (for both HADS-A and HADS-D score) with a sensitivity of 75% and a specificity of 70%, and a Positive Predictive Value (PPV) of 75% based on ROC.¹⁹

Despite advances in the treatment of congestive heart failure, this epidemic continues unabated worldwide. The high morbidity and mortality as well as the marked decrease in quality of life in heart failure patients points to the need for increased attention towards additional risk factors for the course of heart failure. While depression and anxiety has been well-established as an independent risk factor for development of coronary artery disease and as an independent predictor for its prognosis, only recently have the unfavorable effects that depression and anxiety exerts on congestive heart failure been reported. This study is a

collaboration study, involving Department of Medicine, Section of Cardiology and Department of Neurology and Psychiatry.

Methods

A prospective, cross analytical study was conducted. 144 heart failure patients (based on Framingham criteria) admitted either at Intensive Care Unit (ICU) or ward at the University of Santo Tomas Hospital (either at the clinical or private division) from December 2013 to November 2014 were included in this study. In this study, we utilized the HADS-P questionnaire to accommodate the questionnaire more easily to our subjects. After securing consent from the attending physicians and patients (Appendix C and D), the HADS-P questionnaires were then administered to the patients at the end of hospitalization by the investigator/s. Patients were asked to read the HADS-P questionnaires and then gave check sign (✓) for each answer in the right column of the HADS-P questionnaires. The optimal cut-off score recommended for HADS-P is a HADS score of 11 (for both HADS-A and HADS-D score) with a sensitivity of 75% and a specificity of 70% as described by De Guzman's study. The medical records of the patients were also reviewed by the investigator/s. There were no any additional laboratory examinations.

Clinical profiles of the patients were gathered using Case Report Form (Appendix B). The following data was collected: socio-demographic data (age, sex, civil status, religion, educational attainment, and employment status), first admission versus repeated admission, cause of heart failure, level of EF, presence of co-morbidity disease/s, and length of hospital stay.

In this study, Chi-square and Independent T-tests were used for data analysis. Chi-square test (Fisher Exact Test for 2x2 table) was used to determine association between HADS-P score (both HADS-A and HADS-D score) with categorical variables. With this test, we determined if those categorical variables are significant factors for anxiety or depression. Independent T-test was used for continuous variable, to determine significant difference with anxiety or depression and without. If the p-value is < 0.05, we conclude significance at 95% level of significance. We used SPSS software in computing the results. This method of data analysis was consulted with a biostatistician.

Results

One hundred forty-four heart failure patients admitted at the University of Santo Tomas Hospital from December 2013 to November 2014 were enrolled in this study. Of these, 19 patients have HADS-D score of 11 or above and 37 patients have HADS-A score of 11 or above. Based on HADS-D score,

Table I. Prevalence of anxiety and depression among heart failure patients (n=144)

	Patients with depression (HADS-D Score of \geq 11)	Patients with anxiety (HADS-A Score of \geq 11)
Heart failure patients	19	37
Prevalence	13.2 %	25.7 %

Table II. Socio-demographic factors among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
AGE (mean interval)	62.96 \pm 13.26	62.89 \pm 13.83	62.95 \pm 13.28	0.984
GENDER				
Male	60 (48%)	11 (57.9%)	71 (49.3%)	0.468
Female	65 (52%)	8 (42.1%)	73 (50.7%)	
CIVILSTATUS				
Single	18 (14.4%)	3 (15.8%)	21 (14.6%)	0.581
Married	79 (63.2%)	13 (68.4%)	92 (63.9%)	
Widowed/Separated	28 (22.4%)	3 (15.8%)	31 (21.5%)	
RELIGION				
Catholic	113 (90.4%)	15 (78.9%)	128 (88.9%)	0.142
Christian	6 (4.8%)	2 (10.5%)	8 (5.6%)	
Others	6 (4.8%)	2 (10.5%)	8 (5.6%)	
EDUCATIONAL				
Non-high school	18 (14.4%)	7 (36.8%)	25 (17.4%)	0.625
High school	46 (36.8%)	3 (15.8%)	49 (34%)	
Vocational/Technical	16 (12.8%)	0 (0%)	16 (11.1%)	
College	45 (36%)	9 (47.4%)	54 (37.5%)	
OCCUPATION				
Non-Working	90 (72%)	16 (84.2%)	106 (73.6%)	0.402
Working	35 (28%)	3 (15.8%)	38 (26.4%)	

the prevalence of depression among heart failure patients is 13.2% (19/144 patients x 100%) and while based on HADS-A score, the prevalence of anxiety among heart failure patients is 25.7% (37/144 patients x 100%). (Table I)

As to the socio-demographic factors of heart failure patients, the mean interval of age among patients with depression is 62.89+13.83 standard deviation (SD) and among patients without depression is 62.96+13.26 SD. While the mean interval of age among patients with anxiety is 60.3+13.21 SD and among patients without anxiety is 63.87+13.25 SD. However, there is no significant difference of distribution of age for depression and anxiety. As to the distribution of gender, there is male predominant among patients with depression (57.9%) and female predominant among patients without depression (42.1%). While among patient with anxiety there is female predominant (54.1%) and among patient without anxiety there is male predominant (50.5%). However, there is no significant difference of distribution of gender for depression and anxiety (Table II).

Table III. Socio-demographic factors among heart failure patients with and without anxiety

	Patients w/o anxiety (n=107)	Patients w/ anxiety (n=37)	Total (n=144)	P-value
AGE (mean interval)	63.87 ± 13.25	60.3 ± 13.21	62.95 ± 13.28	0.159
GENDER				
Male	54 (50.5%)	17 (45.9%)	71 (49.3%)	0.705
Female	53 (49.5%)	20 (54.1%)	73 (50.7%)	
CIVILSTATUS				
Single	16 (15%)	5 (13.5%)	21 (14.6%)	0.599
Married	66 (61.7%)	26 (70.3%)	92 (63.9%)	
Widowed/Separated	25 (23.4%)	6 (16.2%)	31 (21.5%)	
RELIGION				
Catholic	99 (92.5%)	29 (78.4%)	128 (88.9%)	0.062
Christian	4 (3.7%)	4 (10.8%)	8 (5.6%)	
Others	4 (3.7%)	4 (10.8%)	8 (5.6%)	
EDUCATIONAL				
Non-high school	20 (18.7%)	5 (13.5%)	25 (17.4%)	0.774
High school	34 (31.8%)	15 (40.5%)	49 (34%)	
Vocational/Technical	14 (13.1%)	2 (5.4%)	16 (11.1%)	
College	39 (36.4%)	15 (40.5%)	54 (37.5%)	
OCCUPATION				
Non-Working	79 (73.8%)	27 (73%)	106 (73.6%)	0.919
Working	28 (26.2%)	10 (27%)	38 (26.4%)	

Table IV. Number of admission among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
Number of admission				
First admission	56 (44.8%)	6 (31.6%)	62 (43.1%)	0.281
Repeat admission	69 (55.2%)	13 (68.4%)	82 (56.9%)	

Table V. Number of admission among heart failure patients with and without anxiety

	Patients w/o anxiety (n=107)	Patients w/ anxiety (n=37)	Total (n=144)	P-value
Number of admission				
First admission	50 (46.7%)	12 (32.4%)	62 (43.1%)	0.132
Repeat admission	57 (53.3%)	25 (67.6%)	82 (56.9%)	

Table VI. Cause of heart failure among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
Cause of heart failure				
Coronary artery disease	112 (89.6%)	19 (100%)	131 (91%)	0.217
Elevated troponin I	51 (40.8%)	10 (52.6%)	61 (42.4%)	0.455

Table VI. Cause of heart failure among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
Prior myocardial infarction	23 (18.4%)	5 (26.3%)	28 (19.4%)	0.533
Prior coronary angiography	18 (14.4%)	8 (42.1%)	26 (18.1%)	0.008
Prior coronary angioplasty	8 (6.4%)	4 (21.1%)	12 (8.3%)	0.050
Prior CABG	5 (4%)	0 (0%)	5 (3.5%)	1.000
Valvular heart disease	7 (5.6%)	0 (0%)	7 (4.9%)	0.594
Prior surgery	0 (0%)	0 (0%)	0 (0%)	-
Congenital heart disease	0 (0%)	0 (0%)	0 (0%)	-
Prior surgery	0 (0%)	0 (0%)	0 (0%)	-
Drug/toxic induced cardiomyopathy	9 (7.2%)	1 (5.3%)	10 (6.9%)	1.000
Peripartum cardiomyopathy	1 (0.8%)	0 (0%)	1 (0.7%)	1.000

Table VII. Cause of heart failure among heart failure patients with and without anxiety

	Patients w/o anxiety (n=107)	Patients w/ anxiety (n=37)	Total (n=144)	P-value
Cause of heart failure				
Coronary artery disease	98 (91.6%)	33 (89.2%)	131 (91%)	0.741
Elevated troponin I	45 (42.1%)	16 (43.2%)	61 (42.4%)	1.000
Prior myocardial infarction	19 (17.8%)	9 (24.3%)	28 (19.4%)	0.470
Prior coronary angiography	19 (17.8%)	7 (18.9%)	26 (18.1%)	1.000
Prior coronary angioplasty	8 (7.5%)	4 (10.8%)	12 (8.3%)	0.505
Prior CABG	4 (3.7%)	1 (2.7%)	5 (3.5%)	1.000
Valvular heart disease	7 (6.5%)	0 (0%)	7 (4.9%)	0.191
Prior surgery	0 (0%)	0 (0%)	0 (0%)	-
Congenital heart disease	0 (0%)	0 (0%)	0 (0%)	-
Prior surgery	0 (0%)	0 (0%)	0 (0%)	-
Drug/toxic induced cardiomyopathy	6 (5.6%)	4 (10.8%)	10 (6.9%)	0.280
Peripartum cardiomyopathy	1 (0.9%)	0 (0%)	1 (0.7%)	1.000

Table VIII. Ejection fraction among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
Level of ejection fraction				
EF < 40%	44 (35.2%)	15 (78.9%)	59 (41%)	0.0002
EF ≥ 40%	81 (64.8%)	4 (21.1%)	85 (59%)	

Table IX. Ejection fraction among heart failure patients with and without anxiety

	Patients without anxiety (n=107)	Patients with anxiety (n=37)	Total (n=144)	P-value
Level of ejection fraction				
EF < 40%	41 (38.3%)	18 (48.6%)	59 (41%)	0.333
EF ≥ 40%	66 (61.7%)	19 (51.4%)	85 (59%)	

As to other socio-demographic factors, among depressed and anxious patients, predominantly they are married (68.4% and 70.3%, respectively), catholic (78.9% and 78.4%, respectively), and unemployed or retired (84.2% and 73%, respectively) but there is no significant difference compared with normal patients. As to the educational attainment, among patients with depression predominantly they are college graduate (47.4%) and among patients without depression predominantly they are high school graduate (36.85%). While among patients with anxiety predominantly they are high school or college graduate (40.5%) and among patients without anxiety predominantly they are college graduate (36.4%). In conclusion, there are no significant socio-demographic factors for depression and anxiety as shown in Table III

As to the number of admission, among depressed and anxious patients, predominantly they have been admitted previously (68.4% and 67.6%, respectively). However, the number of admission is not a significant factor for depression and anxiety as shown in Table IV and V

As to the cause of heart failure, the predominant cause of heart failure is coronary artery disease among those with and without depression and anxiety and there is no significant cause of heart failure for depression and anxiety (Table VI and VII). However, there is a higher percentage of having prior coronary angiography or prior coronary angioplasty (42.1% and 21.1%, respectively) among those with depression compared to those without depression. As shown in Table VIII, having prior coronary angiography or prior coronary angioplasty is a significant factor for depression with *p*-value of 0.008 and 0.050, respectively.

As to the level of EF, there is significantly higher percentage of having EF <40% among those who are depressed (78.9%) compared to those who are non-depressed (21.15%). As shown in Table VIII, the level of EF is a significant factor for depression with *p*-value of 0.0002. While among patients with anxiety, although there is a higher percentage having EF <40% (48.6%) compared to patients without anxiety (38.3%), there is no significant difference on the level of EF between those with anxiety and without it (Table IX).

As to the presence of co-morbidity disease/s, having a diabetes mellitus, chronic obstructive pulmonary disease, bronchial asthma, and chronic kidney disease on maintenance dialysis, and urinary tract infection is significant factor for depression (Table X). While for anxiety, the presence of co-morbidity disease/s is not a significant factor (Table XI).

As to the length of hospital stay, the mean interval of length of hospital stay among patients with depression is 10.47±4.79 SD and among patients without depression is 8.53±4.9 SD. While the mean interval of length of hospital stay among patients with anxiety is 12.08±6.5 SD and among patients without anxiety is 7.64±3.63 SD. There is significant

Table X. Comorbidity disease/s among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
Presence of co-morbidity disease/s				
Diabetes mellitus	67 (53.6%)	15 (78.9%)	82 (56.9%)	0.047
Hypertension	100 (80%)	16 (84.2%)	116 (80.6%)	1.000
Pneumonia	59 (47.2%)	10 (52.6%)	69 (47.9%)	0.806
Chronic obstructive pulmonary disease	8 (6.4%)	7 (36.8%)	15 (10.4%)	0.001
Bronchial asthma	7 (5.6%)	5 (26.3%)	12 (8.3%)	0.010
Pre-dialytic chronic kidney disease	20 (16%)	2 (10.5%)	22 (15.3%)	0.738
Chronic kidney disease on maintenance dialysis	8 (6.4%)	4 (21.1%)	12 (8.3%)	0.050
Cancer	2 (1.6%)	1 (5.3%)	3 (2.1%)	0.348
Cerebral vascular accident	10 (8.1%)	2 (10.5%)	12 (8.4%)	0.662
Thyroid disease	4 (3.2%)	0 (0%)	4 (2.8%)	1.000
Urinary tract infection	7 (5.6%)	4 (21.1%)	11 (7.6%)	0.040

Table XI. Comorbidity disease/s among heart failure patients with and without anxiety

	Patients w/o anxiety (n=107)	Patients w/ anxiety (n=37)	Total (n=144)	P-value
Presence of co-morbidity disease/s				
Diabetes Mellitus	60 (56.1%)	22 (59.5%)	82 (56.9%)	0.848
Hypertension	88 (82.2%)	28 (75.7%)	116 (80.6%)	0.470
Pneumonia	48 (44.9%)	21 (56.8%)	69 (47.9%)	0.254
Chronic obstructive pulmonary disease	9 (8.4%)	6 (16.2%)	15 (10.4%)	0.214
Bronchial asthma	9 (8.4%)	3 (8.1%)	12 (8.3%)	1.000
Pre-dialytic chronic kidney disease	16 (15%)	6 (16.2%)	22 (15.3%)	0.798
Chronic kidney disease on maintenance dialysis	8 (7.5%)	4 (10.8%)	12 (8.3%)	0.505
Cancer	1 (0.9%)	2 (5.4%)	3 (2.1%)	0.162
Cerebral vascular accident	9 (8.5%)	3 (8.1%)	12 (8.4%)	1.000
Thyroid disease	3 (2.8%)	1 (2.7%)	4 (2.8%)	1.000
Urinary tract infection	8 (7.5%)	3 (8.1%)	11 (7.6%)	1.000

Table XII. Length of hospital stay among heart failure patients with and without anxiety

	Patients without anxiety (n=107)	Patients with anxiety (n=37)	Total (n=144)	P-value
Length of hospital stay				
Mean interval	7.64 ± 3.63	12.08 ± 6.5	8.78 ± 4.92	0.0001

Table XIII. Length of hospital stay among heart failure patients with and without depression

	Patients w/o depression (n=125)	Patients w/ depression (n=19)	Total (n=144)	P-value
Length of hospital stay				
Mean interval	8.53 ± 4.9	10.47 ± 4.79	8.78 ± 4.92	0.108

longer length of hospital stay among patients with anxiety compared to patients without anxiety with p-value of 0.0001 (Table XII). While among patients with and without depression, there is no significant difference on the length of hospital stay (Table XIII)

Discussion

Depression and anxiety are very common among medically ill patients. Based on the local study done by Maria Rosanna De Guzman, M.D., the prevalence of depression and anxiety among medically ill patients is 26.9% and 14.3%, respectively. Our study reveals that depression and anxiety are also common among heart failure patients, with the prevalence of depression and anxiety is 13.2% and 25.7%, respectively.¹⁹

In term of the socio-demographic factors (age, gender, civil status, religion, educational attainment, and employment status), there are no significant differences among patients with and without depression as well as among patients with and without anxiety. The number of admission and cause of heart failure are also not significant factors for depression and anxiety. However as shown in Appendix E Table 4.1, having prior coronary angiography or prior coronary angioplasty is significant factor for depression. There is significantly higher percentage of having prior coronary angiography and prior coronary angioplasty among those who are depressed compared to those who are non-depressed.

Other significant factor for depression is the level of EF. There is significantly higher percentage of having EF <40% among patients with depression compared to patients without depression. Having multiple comorbidity diseases such as diabetes mellitus, chronic obstructive pulmonary disease, bronchial asthma, chronic kidney disease on maintenance dialysis, and urinary tract infection, is also a significant factor for depression. While among patient with anxiety, the significant factor is the length of hospital stay. There is significant longer of hospital stay among those with anxiety compared to those without anxiety.

Based on the above mentioned results, we can conclude that depression and anxiety are prevalent in cardiac patients, specifically in heart failure patients. And since the presence of depression and anxiety is associated

with increased morbidity and mortality, a simple method for recognition of depression and anxiety among heart failure patients therefore will be beneficial. The HADS questionnaire has many advantages to identify the presence of depression and anxiety. It is a short questionnaire (14 items) and has been translated in many languages, including in Tagalog language. The HADS-P questionnaire, the Tagalog version of HADS questionnaire, has been validated in De Guzman's study. And according to the above mentioned results, it is more beneficial and urged to utilize the HADS-P questionnaire among depressed patients having prior coronary angiography, prior coronary angioplasty, multiple co-morbidity diseases, and EF <40% since those are significant factors for depression. While among anxiety patients, the significant factor is the length of hospital stay, therefore utilizing the HADS-P questionnaire will be more beneficial among patient with anxiety and long hospital stay.

By using the HADS-P questionnaire, we will be able to identify the possible and probable of depression and anxiety disorders among medically ill patients. And when clinically important findings are noted (the HADS-A or HADS-D score of 11 or above), formal psychiatric referral can be taken if necessary and once consented by the patient. And since depression and anxiety are associated with high morbidity and mortality in cardiac patients and heart failure patients have poor prognosis, therefore by diagnosing and then treating the depression and anxiety in patients with heart disease, especially in heart failure patients, the cardiac prognosis and quality life of the patients might be improved.

Conclusion

Depression or anxiety and heart disease are very common and often co-exist. This study shows that depression and anxiety are common in heart failure patients. Having prior coronary angiography, coronary angioplasty, EF < 40%, and multiple co-morbidity diseases/s are significant factors for depression among heart failure patients. Moreover, heart failure patients with anxiety have significantly longer length of hospital stay compared to those without anxiety. These findings might imply that heart failure patients should be evaluated early for detection of depression and anxiety especially among those having above mentioned clinical profile.

The HADS questionnaire has been used extensively among patients with heart disease. Screening of depression and anxiety by utilizing the HADS questionnaire is a simple, non-invasive method, and well-established method that a patient can self-administer easily. The HADS-P questionnaire has been validated in De Guzman's study. In our country, we can utilize the HADS-P questionnaire to accommodate the questionnaire easily to the patient.

The poor prognosis as well as the marked decrease in quality of life among heart failure patients points the need to be able to identify additional risk factors for the cause of heart failure. In another hand, depression and anxiety have higher morbidity and mortality in patients with heart disease. By diagnosing and treating the depression and anxiety among cardiac patients especially among heart failure patients, either by pharmacological and/or psychotherapeutic, the prognosis and quality of life of the patients might be improved. A formal and appropriate psychiatric referral can be taken and should be a part of the comprehensive management among heart failure patients with depression and anxiety.

This study is not without limitation. We recommend a bigger base or population and at least comparable size between patients with and without depression or anxiety. We recommend conducting a case-control study so the size of patients with depression or anxiety will be comparable with those without depression or anxiety.

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APPENDICES

APPENDIX A-1: HOSPITAL ANXIETY AND DEPRESSION SCALE

Direction:

Doctors are aware that emotions play an important part in most illnesses. If your doctor knows about these feelings he/she will be able to help you more.

This questionnaire is designed to help your doctor to know how you feel. Read each item and mark the box () with a check mark (✓) beside the reply which comes closest to how you have been feeling in the past week.

Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought response.

<p>A 1. I feel tense:</p> <p>3 Most of the time <input type="checkbox"/></p> <p>2 A lot of the time <input type="checkbox"/></p> <p>1 From time to time, occasionally <input type="checkbox"/></p> <p>0 Not at all <input type="checkbox"/></p>	<p>D 2. I feel as if I am slowed down:</p> <p>3 Nearly all the time <input type="checkbox"/></p> <p>2 Very often <input type="checkbox"/></p> <p>1 Sometimes <input type="checkbox"/></p> <p>0 Not at all <input type="checkbox"/></p>
<p>D 3. I still enjoy the things I used to enjoy:</p> <p>0 Definitely as much <input type="checkbox"/></p> <p>1 Not quite as much <input type="checkbox"/></p> <p>2 Only a little <input type="checkbox"/></p> <p>3 Hardly at all <input type="checkbox"/></p>	<p>A 4. I get a sort of frightened feeling as if something awful is about to happen:</p> <p>3 Very definitely and quite badly <input type="checkbox"/></p> <p>2 Yes, but not too badly <input type="checkbox"/></p> <p>1 A little, but it doesn't worry me <input type="checkbox"/></p> <p>0 Not at all <input type="checkbox"/></p>
<p>A 5. I get sort of frightened feeling like "butterflies" in the stomach:</p> <p>0 Not at all <input type="checkbox"/></p> <p>1 Occasionally <input type="checkbox"/></p> <p>2 Quite often <input type="checkbox"/></p> <p>3 Very often <input type="checkbox"/></p>	<p>D 6. I have lost interest in my appearance:</p> <p>3 Definitely <input type="checkbox"/></p> <p>2 I don't take so much care as I should <input type="checkbox"/></p> <p>1 I may not take quite as much care <input type="checkbox"/></p> <p>0 I take just as much care as ever <input type="checkbox"/></p>
<p>D 7. I can laugh and see the funny side of things:</p> <p>0 As much as I always could <input type="checkbox"/></p> <p>1 Not quite so much now <input type="checkbox"/></p> <p>2 Definitely not so much now <input type="checkbox"/></p> <p>3 Not at all <input type="checkbox"/></p>	<p>A 8. I feel restless as if I have to be on the move:</p> <p>3 Very much indeed <input type="checkbox"/></p> <p>2 Quite a lot <input type="checkbox"/></p> <p>1 Not very much <input type="checkbox"/></p> <p>0 Not at all <input type="checkbox"/></p>
<p>A 9. Worrying thoughts go through my mind:</p> <p>3 A great deal of time <input type="checkbox"/></p> <p>2 A lot of time <input type="checkbox"/></p> <p>1 From time to time but not too often <input type="checkbox"/></p> <p>0 Only occasionally <input type="checkbox"/></p>	<p>D 10. I look forward with enjoyment to things:</p> <p>0 As much as ever I did <input type="checkbox"/></p> <p>1 Rather less than I used to <input type="checkbox"/></p> <p>2 Definitely less than I used to <input type="checkbox"/></p> <p>3 Hardly at all <input type="checkbox"/></p>
<p>D 11. I feel cheerful:</p> <p>3 Not at all <input type="checkbox"/></p> <p>2 Not often <input type="checkbox"/></p> <p>1 Sometimes <input type="checkbox"/></p> <p>0 Most of the time <input type="checkbox"/></p>	<p>A 12. I get sudden feelings of panic:</p> <p>3 Very often indeed <input type="checkbox"/></p> <p>2 Quite often <input type="checkbox"/></p> <p>1 Not very often <input type="checkbox"/></p> <p>0 Not at all <input type="checkbox"/></p>
<p>A 13. I can sit at ease and feel relaxed:</p> <p>0 Definitely <input type="checkbox"/></p> <p>1 Usually <input type="checkbox"/></p> <p>2 Not often <input type="checkbox"/></p> <p>3 Not at all <input type="checkbox"/></p>	<p>D 14. I can enjoy a good book or radio or TV program:</p> <p>0 Often <input type="checkbox"/></p> <p>1 Sometimes <input type="checkbox"/></p> <p>2 Not often <input type="checkbox"/></p> <p>3 Very seldom <input type="checkbox"/></p>

Now check if you have answered all questions. Thank you very much!

Comments:

FOR HOSPITAL USE ONLY:

D (8 - 10) _____

A (8 - 10) _____

APPENDIX A-2: HOSPITAL ANXIETY AND DEPRESSION SCALE – PILIPINO VERSION (HADS-P)

Mga Direksyon sa Pagsagot:

Alam ng mga doktor na may mahalagang papel ang damdamin natin sa maraming sakit. Kung alam ng iyong doktor ang inyong nararamdaman, mas matutulungan niya kayo. Ang palatanungang ito ginawa para tulungan ka ng inyong doktor na malaman ang inyong nararamdaman. Basahin ang bawat tanong at i-tsek (✓) ang kahon (☐) ng katugmang sagot na pinakamalapit sa inyong nararamdaman sa nakaraang linggo.

Huwag masyadong magtagal sa pagsagot; ang inyong unang reaksyon ay mas malamang na tama kaysa mas matagal na pinag-isipang sagot. Isang sagot lamang ang i-tsek (✓) sa bawat tanong.

A	1. Naliligalig at punong-puno na ako:		D	2. Pakiramdam koo parang pinapanagal ako:	
3	Mas madalas kaysa hindi	<input type="checkbox"/>	3	Halos lagi-lagi	<input type="checkbox"/>
2	Madalas	<input type="checkbox"/>	2	Napakadulas	<input type="checkbox"/>
1	Paminsan-minsan	<input type="checkbox"/>	1	Minsan	<input type="checkbox"/>
0	Hinding-hindi	<input type="checkbox"/>	0	Hinding-hindi	<input type="checkbox"/>
D	3. Ilkinasasaya ko pa rin ang mga bagay na dati ko nang ikinasasaya:		A	4. Para akong natatakot na may nararamdamang sobrang nerbiyos:	
0	Katulad din ng dati	<input type="checkbox"/>	3	Hinding-hindi	<input type="checkbox"/>
1	Hindi na kasingdalas	<input type="checkbox"/>	2	Paminsan-minsan	<input type="checkbox"/>
2	Konti lang	<input type="checkbox"/>	1	Medyo madalas	<input type="checkbox"/>
3	Halos hindi na	<input type="checkbox"/>	0	Madalas na madalas	<input type="checkbox"/>
A	5. Para akong natatakot na may mangyayaring masama:		D	6. Nawalan na ako ng interes sa aking hitsura:	
0	Lagi-lagi at medyo lang	<input type="checkbox"/>	3	Talaga	<input type="checkbox"/>
1	Palagi pero di-gaanong malala	<input type="checkbox"/>	2	Hindi ako nangangalaga ng dapat	<input type="checkbox"/>
2	Konti pero 'di ako nag-aalala	<input type="checkbox"/>	1	Pwedeng hindi ako mag-alaga ng nararapat	<input type="checkbox"/>
3	Hinding-hindi	<input type="checkbox"/>	0	Pinapangalagaan ko pa rin ito katulad ng dati	<input type="checkbox"/>
D	7. Kaya ko pang tumawa at mapansin ang nakakatuwang bahagi sa mga bagay-bagay:		A	8. Hindi ako mapakali na parang gusto kong may pinagkakaabalahan:	
0	Lagi-lagi tulad ng dati	<input type="checkbox"/>	3	Talgang madalas	<input type="checkbox"/>
1	Mas madalang na ng konti kaysa dati	<input type="checkbox"/>	2	Medyo madalas	<input type="checkbox"/>
2	Hindi na katulad ng dati	<input type="checkbox"/>	1	Di nman gaano	<input type="checkbox"/>
3	Hinding-hindi	<input type="checkbox"/>	0	Hinding-hindi	<input type="checkbox"/>
A	9. Pag-aalala ang nasa isip ko:		D	10. Masaya akong umaasa sa bagay-bagay:	
3	Madalas na madalas	<input type="checkbox"/>	0	Kasing dalas ng nakagawian ko	<input type="checkbox"/>
2	Madalas	<input type="checkbox"/>	1	Di-kasingdalas ng nakagawian ko	<input type="checkbox"/>
1	Di gaanong madalas	<input type="checkbox"/>	2	Mas madalang kaysa nakagawian ko	<input type="checkbox"/>
0	Konting-konti	<input type="checkbox"/>	3	Halos hindi na	<input type="checkbox"/>
D	11. Masaya ang aking pakiramdam:		A	12. Bigla akong nakakaramdam ng pagkasindak:	
3	Hindi kailanman	<input type="checkbox"/>	3	Madalas na madalas	<input type="checkbox"/>
2	Madalang	<input type="checkbox"/>	2	Medyo madalas	<input type="checkbox"/>
1	Paminsan-minsan	<input type="checkbox"/>	1	Di-gaanong madalas	<input type="checkbox"/>
0	Kadlasan	<input type="checkbox"/>	0	Hinding-hindi	<input type="checkbox"/>
A	13. Kaya kong umupo nang kumportable at magrelaks:		D	14. Kaya kong maaliw sa isang magandang libro o programa sa radio o TV:	
0	Palagi	<input type="checkbox"/>	0	Madalas	<input type="checkbox"/>
1	Madalas	<input type="checkbox"/>	1	Paminsan-minsan	<input type="checkbox"/>
2	Madalang	<input type="checkbox"/>	2	Madalang	<input type="checkbox"/>
3	Hinding-hindi	<input type="checkbox"/>	3	Madalang na madalang	<input type="checkbox"/>

Pakitiyak lang kung nasagutan ninyo ang lahat ng tanong. Maraming salamat po!

Komentaryo:

PARA SA OSPITAL:

D (8 – 10) _____
A (8 – 10) _____

Appendix C: Intent Letter and Informed Consent for The Attending Physician

Date

To: Name of attending physician
University of Santo Tomas Hospital
Manila

Department of Internal Medicine, section of Cardiology and Department of Neurology and Psychiatry of University of Santo Tomas Hospital has collaboration study entitled "Anxiety and depression in heart failure patients: A prospective, cross-sectional study." Anxiety and depression are the most two common mental disorders among medically ill patients admitted in the general hospital with a reported prevalence of 10%-50%. Anxiety and depression could be related with clinical profile of the patients. This study aims to determine the prevalence of depression and anxiety and its correlation with clinical profile in heart failure patients using Hospital Anxiety and Depression Scale-Pilipino version (HADS-P).

We are inviting all heart failure patients 18 years old and above and less than 60 years old, who are admitted at Intensive Care Unit (ICU) or ward at the University of Santo Tomas Hospital (clinical and private division). Over one year period, there will be a total of 144 participants from University of Santo Tomas Hospital.

In lieu of this, we would like your kind permission to include your patient in this study. If clinically important findings are noted, your will be informed so that further action such as formal psychiatry referral may be taken if necessary. All information obtained during this study, including hospital records, personal data, and research data will be kept confidential. However, this information may be inspected by the appropriate governmental agencies and/or the Institutional Review Board of the University of Santo Tomas Hospital in accordance with the legislation in force. This study was approved by the Institutional Review Board of the University of Santo Tomas Hospital.

After securing your permission, we will explain this study to your patient and secure the informed consent. If you agree to allow us to include your patient in this study, please kindly sign at the attached letter and also at the informed consent. You will be received a copy of this document to keep. We are hoping for your favorable response. Thank you.

Sincerely yours,

NADIA MULJADI, MD
Principal Investigator
Fellow in training
Section of Cardiology, Department of Internal Medicine
University of Santo Tomas Hospital

Date

This letter is to certify that I am allowing Nadia Muljadi, MD to include my patient: Name, age/sex as a subject in her study entitled "Anxiety and depression in heart failure patients: A prospective, cross-sectional study". Thank you.

Sincerely,

Name of attending physician
University of Santo Tomas Hospital
Manila

Appendix D-1: Informed Consent Form (English Version)

Department of Internal Medicine, Section of Cardiology
Department of Neurology and Psychiatry
UNIVERSITY OF SANTO TOMAS HOSPITAL
España, Manila

CONSENT TO ACT AS A RESEARCH SUBJECT
"Anxiety and depression in heart failure patients:
A prospective, cross-sectional study"

You are invited to participate in this study. Please take time to read through the information provided in this sheet. The study will also be explained to you and you will be given the chance to ask questions. After you are satisfied that you understand this study, and wish to take part in the study, please sign this informed consent form. You will be given a copy of this informed consent form to take home with you.

Anxiety and depression are the most two common mental disorders among medically ill patients admitted in the general hospital with a reported prevalence of 10%-50%. Anxiety and depression could be related with clinical profile of the patients. This study aims to determine the prevalence of depression and anxiety and its correlation with clinical profile in heart failure patients.

We are inviting all heart failure patients 18 years old and above and less than 60 years old, who are admitted at Intensive Care Unit (ICU) or ward at the University of Santo Tomas Hospital (clinical and private division). Over one year period, there will be a total of 144 participants from University of Santo Tomas Hospital.

STUDY PROCEDURES

First, your attending physician will be fully informed regarding details of this study. If your attending physician has agreed to include you in this study, he will be asked to sign this informed consent. Second, after securing approval from your attending physician, the investigator/s will explain this study to you and ask you to read and sign this informed consent as evidence of your willingness to participate in this study.

If you agree to take part in this study:

a. We will give you a short questionnaire, named Hospital and Anxiety Depression Scale (HADS). The Hospital Anxiety and Depression Scale (HADS) was developed to identify possible and probable of anxiety disorders and depression. It has 14 short items and is divided into seven items of anxiety subscale (HADS-A) and seven items of depression subscale (HADS-D). In this study, we will utilize Hospital Anxiety and Depression Scale Filipino Version (HADS-P) to accommodate the questionnaire more easily. Please mark the box () with check sign () for each answer of the HADS-P questionnaire.

b. Your medical records will be reviewed by the investigator/s.

c. You will not spend for any additional laboratory examination/s.

Your participation will last for about 15-20 minutes. No additional visits will be required.

BENEFITS AND RISKS

Your participation in this study may add to the medical knowledge about anxiety and depression in heart failure patients. If clinically important findings are noted (you have HADS-A and or HADS-P score of 11 and above), your attending physician will be informed so that further action such as formal psychiatric referral may be taken if necessary. No blood testing or other procedures will be done.

SUBJECT'S RESPONSIBILITIES

It is important that you disclose all relevant medical history to the study doctor. You must carefully follow any instructions given to you concerning the study. By participating in this study, you will contribute significantly to the medical care of the community.

COSTS AND PAYMENTS IF PARTICIPATING IN THE STUDY

The cost of the data sheets that will be used in this study will be shouldered by the investigators. You will not be paid any money for participating in this study.

STUDY PARTICIPATION AND WITHDRAWAL

Your participation in the study is entirely voluntary. You may refuse to participate or withdraw at any time without penalty or jeopardy to the medical care to which you are entitled. You may be removed from this study by the investigator without your consent if you do not follow the study procedures or if in the opinion of the study doctor, it is in your best interest.

Dr. Muljadi/Dr. De Leon or _____ has explained this study to you and answered your questions. If you have other questions or research-related problems, you may reach Dr. Muljadi/Dr. De Leon at 09339577269/09228973147.

CONFIDENTIALITY

All information obtained during this study, including hospital records, personal data and research data will be kept confidential. However, this information may be inspected by the appropriate governmental agencies and/or the Institutional Review Board of the University of Santo Tomas Hospital in accordance with the legislation in force. By signing written informed consent, you agree with these possible actions. This study was approved by the Institutional Review Board of the University of Santo Tomas Hospital.

If you desire or want any further information regarding your rights as a research patient, you may contact dr. Wilson Tan-De Guzman, the chairman of Institutional Review Board of the University of Santo Tomas Hospital at the 6th Floor Clinical Division Building with contact numbers 731-3001 at local 2610. A copy of this informed consent document will be given to you.

CONSENT STATEMENT:

- You will be received a copy of this consent document to keep.
- You agree to participate in this research study.

Name of Patient (Print)

Signature of Patient

Date

Name of Investigator/
Person administering (Print)

Signature of Investigator/
Person administering

Date

Name of Legally Acceptable
Representative (LAC) (Print)

Signature of LAC

Date

Name of Witness (Print)

Signature of Witness

Date

Name of Attending
Physician (Print)

Signature of Witness

Date

Appendix D-2: Informed Consent Form (Tagalog Version)

Department of Internal Medicine, Section of Cardiology
 Department of Neurology and Psychiatry
 UNIVERSITY OF SANTO TOMAS HOSPITAL
 Espana, Manila

Pahintulot sa Pagsali sa Isang Pagsasaliksik
 "Anxiety and depression in heart failure patients:
 A prospective, cross-sectional study"

Inaanyayahan kayong lumahok sa pag-aaral na ito. Maari po lamang na basahin ang impormasyong nakasaad sa talaang ito. Ipapaliwanag din sa inyo ang pag-aaral na ito at mabibigyan kayo ng pagkakataong magtanong. Kapag naintindihan nyo na ang pag-aaral at nais ninyong sumali, maari po lamang na pirmahan ang katibayan ng pagpapayag sa hulihan.

Ang paglaganap ng lubhang pagkalungkot (depression) at pagkabalisa (anxiety) ay karaniwan sa mga pasyenteng nakaadmit sa ospital at sinasabing nangyayari sa 10-50 porsyento sa kabuuan. Ang dalawang ito ay maaring may kinalaman sa clinical profile ng mga pasyente. Layunin ng pag-aaral na ito na matukoy ang kadalasan ng paglaganap ng lubhang kalungkutan (depression) at pagkabalisa (anxiety) at ang korelasyon o kinalaman nito sa clinical profile ng mga pasyenteng may sintomas na pumapalya ang puso (heart failure).

Ang mga kasali sa pag-aaral na ito ay kailangang nasa hustong edad sa pagitan ng 18 anyos hanggang 60 anyos na may sintomas na pumapalya ang puso (heart failure) na tinitignan sa Intensive Care Unit (ICU) at ward ng University of Santo Tomas Hospital (clinical and pay division). Sa loob ng isang taon, magkakaroon ng 144 na kalahok mula sa University of Santo Tomas Hospital.

PARAAN NG PAGSISIYASAT

Una sa lahat, ang inyong pangunahing doktor ay sasabihan ng buong detalye tungkol sa pag-aaral na ito. Kung siya ay sumag-ayon na ilahok kayo sa pag-aaral na ito, Papapirmahin niya kayo ng informed consent. Pangalawa, pagkatapos ma-siguro ang pag-aaral ng inyong pangunahing doktor, ipapaliwanag ng mga imbestigador ang pag-aaral sa inyo at tatanungin kayo na basahin at pirmahan ang informed consent bilang ebidensya na kusang-loob kayong sumali sa pag-aaral na ito

Kung kayo ay papayag na lumahok sa pag-aaral:

- Bibigyan namin kayo ng maikling questionnaire, ang Hospital Anxiety and Depression Scale (HADS). Ang Hospital Anxiety and Depression Scale (HADS) ay ginawa upang matukoy ang posibilidad at probabilidad ng pagkabalisa at kalungkutan. Ito ay may kabuuang 14 na itema at nahahati sa pitong itema ng pagkakabalisa (HADS-A) at pitong itema ng kalungkutan (HADS-D). Ang pag-aaral na ito ay gagamit ng Hospital Anxiety and Depression Scale-Pilipino Version (HADS-P) para maintindihan ang questionnaire ng mas madali. Lagyan ng Tsek (✓) ang kahon () sa katugmang sagot ng Hospital Anxiety and Depression Scale Filipino Version (HADS-P)
- Pagaaralan ng tigapagsiyasat ang inyong medical records
- Hindi ninyo kailangan magbayad para sa karagdagang laboratory exam.

Ang inyong partisipasyon ay aabot laman sa mga 10-15 na minuto. Hindi na kakailanganin ng karagdagang pagbisita.

MGA BENEPISYO AT PANGANIB O PELIGRO

Ang paglahok niyo sa pagaaral na ito ay makakatulong sa pagpapalawak ng medisina. Kung napatunayan sa clinical na aspeto na may importanteng nakita (ikaw ay may HADS-A at HADS-P score na 11 at pataas), ang inyong pangunahing doktor ay sasabihan para gawan ng aksyon tulad ng pormal na referral sa isang psychiatrist ang kanyang gawin. Kayo ay tatanungin, eeksaminin, at sasagot ng isang questionnaire lamang. Hindi na kakailanganin ng karagdagang pagsusuri sa dugo o iba pang procedure.

MGA RESPONSABILIDAD NG KASAPI

Importante na iyong mailahad ang lahat ng impormasyong nauukol at kailangan sa pagsisiyasat na ito. Ikaw ay kailangang sumunod sa mga patakaran at pamamaraan ng pag-aaral na ito. Ang inyong pagsali sa pag-aaral na ito, ikaw ay makakapagbigay ng karagdagang kaalaman at suporta sa larangan ng medisina.

KABAYARAN SA PAGLAHOK

Ang bayad para sa mga data sheet na gagamitin sa pagaaral na ito ay sasagutin ng mga tagapagsiyasat. Hindi kayo bibigyan ng kahit anong pera para lumahok sa pag-aaral na ito

PAGSASALI AT PAGTANGGI SA PAGSASALIKSIK

Ang pagsali mo sa pagsisiyasat na ito ay mula sa iyong kusang loob. Ikaw ay maaaring tumanggi at tumigil ng walang naaayong kaparusahan. Ikaw ay maaari ding tanggalin ng mga tagapagsiyasat kung ikaw ay hindi sumusunod sa mga patakaran at alituntunin ng pagsisiyasat na ito.

Naipaliwanag sa iyo ng lubos ang pagsisiyasat na ito at nasagot ang inyong mga katanungan ni Dr. Muljadi/Dr. De Leon o _____ . Kung ikaw ay mayroon pang karagdagang katanungan o mga problemang may kaugnayan sa pagsusuring ito, maaaring tawagan at ipagbigay-alam kay Dr. Muljadi/Dr. De Leon sa telepono bilang 09339577269/09228973147.

MANANATILING LIHIM

Lahat ng impormasyon ng pagsisiyasat na ito, kasama na ang dokumento sa ospital, personal at sa pag-aaral na ito ay mananatiling lihim. Subalit, anumang impormasyon ay pwedeng masuri ng mga taga-suporta ng pagsisiyasat na ito, ahensya ng gobyerno at Institutional Review Board ng University of Santo Tomas Hospital. Ang inyong pagpirma sa nakalaang kasulatang pahintulot na ito ay nagpapahiwatig ng inyong pagsang-ayon sa mga nasabing pamamaraan. Ang apgsisiyasat na ito ay inaprobahan ng Institutional Review Board ng University of Santo Tomas Hospital.

Kung nais mo ng karagdagang impormasyon tungkol sa iyong karapatan bilang kasali sa pagsisiyasat na ito, pUwede mong lapitan dr. Wilson Tan-De Guzman, ang punong-tagapamahala ng Institutional Review Board ng University of Santo Tomas Hospital sa 6th Floor Clinical Division Building at sa numerong 731-3001 sa local 2610.

KASULATANG MAGPAPATOTOO SA IYONG PAHINTULOT SUMALI

- Ikaw ay makakatanggap ng sarili mong kopya ng dokumentong ito para sa iyong pag-iingat.
- Malaya mong ibinibigay ang iyong pahintulot para makalahok sa pagsisiyasat na ito.

_____	_____	_____
Pangalan ng Pasyente	Lagda ng Pasyente	Petsa
_____	_____	_____
Pangalan ng Tagapagsaliksik/ Tagapagsuri	Lagda ng Tagapagsaliksik/ Tagapagsuri	Petsa
_____	_____	_____
Pangalan ng Lehitimong Kumakatawan sa Pasyente	Lagda ng Lehitimong Kumakatawan sa Pasyente	Petsa
_____	_____	_____
Pangalan ng Saksi	Lagda ng Saksi	Petsa
_____	_____	_____
Pangalan ng pangunahing doktor (Print)	Lagda ng pangunahing doktor	Petsa

Appendix B: Case Report Form

Name: (Optional) _____ Patient #: _____

Age	Sex	Civil Status: 0-single 0-married 0-widow/ separated	Religion: 0-Catholic 0-Christian 0-Islam 0-Buddhism 0-Others
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Address

Provincial add:

City add:

Educational Attainment:

0 non-high school grad 0 high school grad
0 vocational/technical 0 college graduate

Occupation:

0 not working
0 working as _____

Admission:

0 first admission
0 repeated admission, _____
(total admission)

Causes of heart failure:

0 coronary artery disease:

0 Level of Troponin I:

0 normal (< 0.6), value: _____

0 high (> 0.6), value: _____

0 prior myocardial infarction: when _____

0 prior coronary angiography: when _____, finding: _____

0 prior coronary angioplasty: when _____, type of procedure: _____

0 prior CABG: when _____, type of procedure: _____

0 valvular heart disease:

0 type of valvular heart disease: _____

0 prior valve replacement: when _____, type of procedure: _____

0 prior valve repair: when _____, type of procedure: _____

0 congenital heart disease:

0 type of congenital heart disease: _____

0 prior surgical intervention: when _____, type of procedure: _____

0 drug or toxic cardiomyopathy

0 type of drug or toxic cardiomyopathy: _____

0 peripartum cardiomyopathy

0 prior peripartum cardiomyopathy: when _____

0 others: _____

Ejection fraction:

0 < 40%, value: _____

0 > 40%, value: _____

Length of hospital stay: _____(days)

Please mark (X) to corresponding answer (present/absent)

Co morbidity disease:	Present	Absent	Duration (years)	Medications/Chemotherapy/Radiotherapy
Diabetes Mellitus				
Hypertension				
Pneumonia				
Chronic obstructive pulmonary disease				
Bronchial asthma				
Pre dialytic chronic kidney disease				
Chronic kidney disease in maintenance dialysis				
Carcinomatosis				
Cerebrovascular accident				
Others				