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Original Research

Assessment of Activity of Daily Livings among Patients with Heart Failure at Ibn Sina Teaching Hospital in Mosul City

Ameen Hussein Yousif[1] | Ahmed Mahdi Saleh[2] | Siddeeq Atiya Islubi[3] | Dr. Nawaf Mohammed Dhahir[4]

[1,2,3]Department of Nineveh Health, Primary health care sector in Qayyarah
[4]college of Nursing/University of Mosul
[1]Email: amynh4148@gmail.com
[2]Email: Ahmedmahdisa83@gmail.com
[3]Email: omransiddeeq@gmail.com

Abstract

Background: Chronic disease such as heart failure can contribute to functional disability, which can degrade quality of life by decrease in the ADLs performance.

Objectives of the study: To assess the activity of daily living among patients with heart failure in Ibn Sina teaching hospital in Mosul city as well as to find out the associated between heart failure and activity of daily living.

Methodology: A descriptive quantitative study was conducted in critical care unit in Ibn Sina teaching hospital University From December 2020 to 2021. A non - probability sample of 30 patients was selected.

Results: The data were collected using a questionnaire consisting of two parts, a section that included demographic characteristics and contains (7) paragraphs and a section that include activity of daily livening(Barthel index) which include (Bowels, Bladder, Grooming, Toilet use, Feeding, Transfer , Mobility, Dressing, Stairs and Bathing).

Conclusion: The study concluded that, a great number of sample were male and, the most effected group are older adult and most of them were married .and we also found that difficulty with ADLs was common in patients with HF, progressed over time in many individuals, and was a powerful marker of adverse prognosis. These findings provide new insight into the burden of functional disability in patients with HF.

Keywords: Assessment, Activity of Daily Livings, Patients, Heart Failure.

Introduction:

Heart disease was an uncommon cause of death in the US at the beginning of the 20thcentury.by midcentury it had become the commonest cause after peaking in the mid-1960s, the number of heart disease deaths began a marked decline that has persisted to the present. The increase in heart disease deaths from the early 20th century until the 1960s was due to an increase in the prevalence of coronary atherosclerosis with resultant coronary heart disease, as documented by autopsy studies[(1)]. Heart failure (HF)is a syndrome characterized by high mortality,

frequent hospitalization, reduced quality of life and a complex therapeutic regimen. Approximately 5.1million individuals over the age of twenty years in the united States have heart failure Of those individuals living with HF, only 50% are expected to live five years after initial diagnosis due to progressive pump failure and congestion, sudden cardiac death or end- organ failure resulting from inadequate systemic organ perfusion particularly to the kidney[(2)]. Heart failure occurs more frequently among the elderly, and as the general population continues to age, an increase in the incidence of this syndrome is expected. In fact, with each additional decade beyond the age of 65, there is a twofold increase for the chance of hospitalization for these individuals. There is a male predominance until age 75, but then the occurrence of HF equalizes across genders. The cost of healthcare services, medications, and lost productivity due to HF is staggering creating an annual economic burden in the United States of $32 billion[(3)]. Heart failure is the end stage of all diseases of the heart and is a major cause of morbidity and mortality. It is estimated to account for about 5% of admissions to hospital medical wards, with over 100 000 annual admissions in the United Kingdom[(4)]. Heart failure(HF)is a complex clinical syndrome characterized by typical signs and symptoms and considered to be the common end result of underlying functional or structural heart diseases However ,the heart does not fail in the sense of ceasing to beat(as occurs during cardiac arrest)Rather, it weakens ,usually over the course of months or years, leading to an impaired ability to act as a pump. While a variety of causes (ischemic heart disease, heart valve pathology ,dilated cardiomyopathy etc.)exist, all of them finally result in an impaired pump function or filling of the heart[(5)]. According to world health organization Heart failure(HF)is the number one cause of hospitalization among Medicare recipients and is a major cause of morbidity and mortality among the elderly population in the United States. Older patients often present with different symptoms than those seen in younger patients[(6)].Chronic disease can contribute to functional disability, which can degrade quality of life. Physical disability and loss of independence can complicate the care of patients with chronic diseases such as heart failure(HF)and it can degrade their quality of life [(7)]. ADL is used as an indicator of a person's functional status. The inability to perform ADLs results in the dependence of other individuals and/or mechanical devices. The inability to accomplish essential activities of daily living may lead to unsafe conditions and poor quality of life. Measurement of an individual's ADL is important as these are predictors of admission to nursing homes, need for alternative living arrangements, hospitalization and use of paid home care[(8-20)]. According to world health organization (WHO) Maintaining a good quality of life (QOL) is as important as survival to most patients living with chronic, progressive illness like heart failure. Individuals with heart failure have markedly impaired QOL compared to with other chronic diseases as well as healthy population. Quality of life reflects the multidimensional impact of a clinical condition and its treatment on patients' daily lives. Patients with heart failure experience various physical and emotional symptoms such as dyspnea ,fatigue, edema, sleeping difficulties, depression, and chest pain These symptoms limit patients' daily physical and social activities and result in poor QOL. Poor QOL is related to high hospitalization and mortality rates. Therefore, QOL in patients with heart failure should be assessed appropriately to determine its impact on patients' daily lives[(21-25).]

Methodology:

This descriptive study was carried out to assess the activity of daily livings among patients with Heart failure in Critical Care Unit at Ibn sina teaching hospital. Staring from13 December 2020 to13July2021. Administrative arrangements was granted from the directors of cardiac critical care unit in Ibn-sina teaching Hospital. The Sample of the Study was a purposive (non-probability) sample, it consisted of (30) patients with heart failure in critical care unit in Ibn sina teaching

hospital. The study Instrument was consisted of two main parts; the first part included the socio demographic characteristics, it concerned with determination of the demographic characteristics of these patients with heart failure through designated sheet which include(12) items (age ,gender, level of education, occupation , residency, marital status, socioeconomic status, type of heart failure and duration of heart failure, chronic disease, height and weight). The second part involved the activity of daily living questions, it concerned with the patients ability to perform the activity of daily livings through designated sheet which include(10) basic activity of daily livings (Bowels, Bladder, Grooming, Toilet use, Feeding ,Transfer Mobility, Dressing, Stairs and Bathing). The data were collected through the utilization of the developed questioners and by means of interview technique by using Scales (Barthel index)and by using the Arabic version of the questionnaire. The data collection process has been performed from April 2020 to13 July2021. The data of the present study were analyzed through the application of SPSS version (26).

Results:

Table (1): Distribution of patient with heart failure by their Socio- Demographic Characteristics.

Demographic Characteristics.		Total sample p=30	
Age(years)	Classification	F	%
	-43	3	10.0
	44-55	7	23.3
	57-67	8	26.7
	68-79	6	20.0
	80+	6	20.0
	Total	30	1000.0
	Mean, sd.=63.06±15.50		
Gender	Classification	F	%
	Male	17	56.7
	Female	13	43.3
	Total	30	100.0
education level	Classification	F	%
	cannot read or write	11	36.7
	primary school	11	36.7
	secondary school	7	23.3
	high school	1	3.3
	Total	30	100.0
Occupation	Classification	F	%
	Unemployed	26	86.7
	Employed	4	13.3
	Total	30	100.0
Residency	Classification	F	%
	Rural	12	40.0
	Urban	18	60.0
	Total	30	100-0
Marital state	Classification	F	%
	Single	1	3.3
	Marriage	23	76.7
	Widower	6	20.0
	Total	30	100.0
economic state	Classification	F	%
	Ownership	26	86.7
	Rent	4	13.3
	Total	30	100.0

Table (1) reveal the most of the study research (60.0%) are living in urban residential area. This table reveal the most of the study subjects (56.7%) are male. Regarding age the study indicates that (26.7 %) of patients are within age group (57-67) years old.In regards to marital status around (76.7%) of the study sample are married. Concerning the level of education the highest percent are (36.7%) are cannot read or write.Regarding occupational status about(86.7%)are unemployed In addition, (86.7) of the study sample are having Ownership house

Table (2):Distribution of patient with heart failure by their Medical data:

Medical data		Total sample p=30	
	Classification	F	%
	1	2	6.7
	2	8	26.7
	3	5	16.7
	4	4	13.3
	5	1	3.3
	6	5	16.7
	10	3	10.0
	12	2	6.7
	Total	30	100.0
duration of HF			
Type of HF	Classification	F	%
	Right sight HF	3	10.0
	Left side HF	19	63.3
	Systolic HF	8	26.7
	Total	30	100.0
chronic disease	Classification	F	%
	Hypertension	16	53.3
	Diabetes	3	10.0
	Hypertension + diabetes	11	36.7
	Total	30	100.0
BMI	Classification	F	%
	Underweight	4	13.3
	Optimal	7	23.3
	Overweight	12	40.0
	Obese	7	23.3
	Total	30	100.0

This table shows that(63.3%)of the patient have the left side type of heart.failure with(16.7%)period of years. In addition(53.3%)of the study sample having hypertension in addition body mass index was highest (40•07%)with overweight.

Table (3): activity daily living before heart failure

Items	Unable		Need help		MINOR HELP		independent	
	F	%	F	%	F	%	F	%
1.bowel	1	3.3	9	30.0	_		20	66.7
2.Bladder			11	36.7	_		19	63.3
3.Grommin g			5	16.7	_		25	83.3
4. Toilet use			9	30.0	_		21	70.0
5.Feeding			5	16.7	_	_	25	83.3

6.Transfer			4	13.3	12	40.0	14	46.7
7.Mobility					16	53.3	14	46.7
8.Dressing			9	30.0			21	70.0
9.Stairs	8	26.7	13	43.3			9	30.0
10.Bathing	2	6.7					28	93.3

This table shows activity daily living before heart failure. It was found that(66.7%)Are independent and with normal bowel . In additionto(53.3%)of patients needing minor help in mobility. while the percentage of those who need help climbing stairs was(43.3%)in addition the highest

Table (4): Evaluate activity of daily livening for patient with heart failure pre-total.

Pre total		
Items	F	%
Total dependently		
Sever dependently	5	16.7
Mordent dependently	5	16.7
Slight dependently	20	66.7
total	30	100.0

This table show that no one of the patient is total dependently before having heart failure(66.7%)of patients had a slight dependently of activity daily living before developing heart failure.

Table (5): evaluate activity of daily livening for patient with heart failure POST.

ADL	Unable		Need help		MINOR HELP		independent	
	F	%	F	%	F	%	F	%
1.bowel	8	26.7	16	53.3			6	20.0
2.Bladder	8	26.7	18	60.0			4	13.3
3.Gromming			12	40.0			18	60.0
4. Toilet use	4	13.3	22	73.3			04	13.3
5.Feeding			13	43.3			17	56.7
6.Transfer	2	6.7	19	63.3	6	20.0	3	10.0
7.Mobility	1	3.3	6	20.0	21	70.0	2	6.7
8.Dressing	3	10.0	22	73.3			5	16.7
9.Stairs	25	83.3	4	13.3			1	3.3
10.Bathing	17	56.7					13	43.3

This table show(83.3%)for patients were unable to climb stairs after having heart failure while the percentage of patients who required minor help for mobility was(70.0%)and(73.3%)who needed help in toilet use and dressing. In although(60.0%)of patient independent to perform grooming.

Discussion:

Table (1) presents demographic characteristic of the studied sample through the data analysis, distribution of demographic variables ,the present study reported that the age range is between(32to more than 89)and the age majority is(57-67)years, which account for 8 (26.7%)the mean of age is(63.06) this result agree with [26] were most of their study sample was older adult.The researcher belief that older age of patient most period have heart failure because the heart failure increase dependent on age. regarding to the gender most of the sample are male17(56.7%) and this disagree with [27] were most of their sample are female. This differentiation between studies because the differentiation between area of study. Furthermore,11(36.7%) of the patient cannot read or write .most of the patient (76.7%) were marriage. (86.7%)were unemployed and most of them livening in Urban18(60.0%).The researchers imagine that most patients were married because the age of patients was great and logical to be married because their age is great. This table shows that the majority of the sample (53.3%) have hypertension and These findings are agreed with [28] were most of their sample were had hypertension. And most of the patient 12(40.0%) were overweight These findings are agreed with [29] were 49%of their patient were obese and 31-40% were overweight in addition (63.3%) have left side heart failure with(26.7%) duration of HF. Based on the researcher's point of view most of the patient with heart failure had hypertension because hypertension forces your heart to work harder to pump blood to the rest of your body which lead ventricle to thicken. A thickened left ventricle increases your risk for lift side heart failure. According to available result (53.3%)of patient need help with bowel and (73.35%) need help with Toilet use after having heart failure we also found that moderate or severe difficulty with ADLs was very common in patients with HF were the fending indicate that(43.3%)of patient have sever dependency and(33.3%)were mordent dependency. Accordingly, there was consistency to the order of difficulty with ADLs with eating, toileting and dressing representing the easiest items, and Transfer, Bathing and climbing stairs being the most difficult items to complete and This result agree with [30] they show them result was most have sever dependency and difficulty in these ADL.

Conclusions:

According to the results and the studied samples The percentage of males with HF is slightly higher than females, The most affected age group with HF ranges between 67-57 and It has been observed that most people with HF are unemployed.In this study, we found that the most common type of HF is left side heart failure And that most patients with heart failure suffer from hypertension and obesity.in and based on the BI index, we found that difficulty with ADLs was common In patients with HF, progressed over time in many individuals, Where it was observed that patients sever dependently with perform ADL For example, a high percentage of patients are unable to climb stairs, and that most patients need minor help for mobility. And a large group of patients need help in toilet use and dressing.There is no significant association between age and activity of daily livening in the performance of ADL and also indicates that there is no significant association between ADL and their gender, The findings reveal that there is no significant association was found between (Martial state, residency)and ADL.And There is no significant association Between medical data and activity of daily living such as duration of heart failure and the performance of activity daily livening and also that there is highest significant association Between type of heart failure and the performance of activity daily livening and also The findings reveal that there is significant association Between chronic disease and body mass index.

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