

# Impact Of Clinical Pharmacist Intervention On Quality Of Life And Adherence To Drugs Using Sf-36 Score And Morisky Scale In Patients in Patients With Heart Failure In Azadi Teaching Hospital

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## Abstract

**Background:** Heart failure affecting a wide variety of population, causing high morbidity and mortality with high cost over a year, hospital based clinical pharmacist has an important role in management of patients with heart failure at level of drug monitoring, compliance, adherence to drugs and improving quality of life.

**Aims of The Study:** evaluation of the role of clinical pharmacist intervention in management, monitoring of drug therapy, compliance, adherence and improving quality of life in patients with Heart failure.

**Methods:** 100 patients involved in the study divided into two groups in this case-control comparison study 50 patients managed by MDT without participant of clinical pharmacist and the second 50 patients managed with MDT involving clinical pharmacist intervention using SF-36 score and Morisky scale.

**Results:** Results showed that there is a significant increase in EF% from (35.3±1.8) % to (43.3±1.9) % with a P-value of (0.001)

**Conclusion:** Clinical pharmacist intervention has a vital role in management of patients with Heart failure at a level of improving adherence, compliance, quality of life and as well as improving EF% of patients.

**Keywords:** Heart failure, Compliance, morisky Scale, Clinical pharmacist, Ejection Fraction.

## INTRODUCTION

Heart failure is a syndrome affecting more than 5 million american people costing more than 30 billion dollars .including many symptoms ranging from easily fatigability to severe dysopnea ,many types could be distinguished according to many classifications with multiple synonyms left ventricular heart failure , right ventricular hear failure, backward and forward heart failure and lastly according to European society guidelines (ESC) which Classify the Heart failure to three categories Heart failure with reduced ejection fraction(HFREF) in which EF is <40%, Heart rate with preserved EF with heart failure symptoms in which EF >50% and HFmref(Heart failure with mildly reduced EF ) EF from 40-49%.(1,2,3)

Multidiplinary Team (MDT) including many specialties including clinical pharmacist with a vital role summarized by education ,and advising the patients to increase the adherence of patient and complains to drugs .(4) this study aims to see and value the role of clinical pharmacist intervention in management of heart failure and improving the symptoms of the patients as well as life span of the patient itself.

## Patients and Methods

A Case- control study were done in Azadi teaching hospital from June 2020 to May 2021 included 50 patients with Heart Failure diagnosed by Echo study and symptoms , compared with 50 control patients also had heart failure .In the first group the MDT including Clinical pharmacist while the second group was not .the two groups were followed up for improvement of functional capacity and psychological status as well as complains and adherence to drugs , using Short Form (SF-36) score for follow up and improving the Quality of Life of patients . and morisky scale for Follow Up adherence Of the Patients . ethical approval were taken from committee of kirkuk health directory to do this study.

## Results

This case -control study involves 50 patients diagnosed with Heart Failure ,28 were males and 22 were females their mean ages ( $55\pm 7.89$ ) compared with 50 healthy control group 33 were Males and 27 were females ,mean ages ( $56\pm 8.1$ )(Table 1)

Table 2 shows that the mean Ejection Fraction % for the first group is  $35.3\pm 1.8$  % in comparison with ( $36.1\pm 1.6$ ) % for the second group .)

Follow Up for 6 months for both group shows that the first group which under follow up of MDT involving clinical pharmacist showing significant increase in mean EF % To( $43.3\pm 1.9$ ) % while the second group shows increase in the mean EF% to ( $38.5\pm 2.1$ ) (P-value : 0.001)

Table 1(Demographic distribution of patients in both groups)

|           | 1st group(50 pts) | 2nd group (50 pts) |
|-----------|-------------------|--------------------|
| Males     | 28(56%)           | 33(66%)            |
| Females   | 22(44%)           | 27(54%)            |
| Mean ages | $55\pm 7.89$      | $56\pm 8.1$        |

Table 2 (Comparison between EF% in both groups before Pharmacist intervention)

|                         | 1st group     | 2nd group     |
|-------------------------|---------------|---------------|
| Ejection fraction (EF%) | $35.3\pm 1.8$ | $36.1\pm 1.6$ |

Table 3 EF% before and after Clinical pharmacist intervention

|              | 1st group     | 2nd group     | P-value |
|--------------|---------------|---------------|---------|
| EF % before* | $35.3\pm 1.8$ | $36.1\pm 1.6$ | 0.4     |
| EF % After * | $43.3\pm 1.9$ | $38.5\pm 2.1$ | 0.001   |

Before intervention\* After intervention \*

## Discussion

Heart failure is a syndrome of complex entities resulting in multidrug treatment with low compliance and low adherence of most of patients .(5)

patients education and awareness about importance of taking drugs need continuous follow up of patients with specialist , so multidisciplinary team should involve clinical pharmacist to do this issue .(6,14)

in the current study 100 patients with diagnosed heart failure by clinical signs and symptoms and Echocardiography divided into two groups each group contains 50 patients followed up by multidisciplinary team the first group clinical pharmacist involved while the second group the follow up

continue without clinical pharmacist participant.(7,10,13)

significant correlation in increasing the level of EF% seen in the first group involving the clinical pharmacist intervention. in comparison to other group, the clinical pharmacist intervention involves patient education and awareness about the importance of taking drug(Compliance and adherence) and improving the Quality of life Using SF-36 score for Quality of Life improvement that leads to decrease frequency of hospitalisation and morbidity(13,14) . these results was concordant with most of studies that shows that the clinical pharmacist intervention leading to improve Quality of Life , adherence , and better education for the patients which leading to increase the Level of EF% and improve the Quality Of life and better Compliance and adherence for patients with heart failure( 11,12,15 )

## Conclusion:

Clinical pharmacist intervention in multidisciplinary team has a vital role in improving the general status of Heart failure regarding improving EF%, symptoms ,Quality of life ,compliance and adherence of the patients with Heart failure , In this study we conclude that the clinical pharmacist intervention improve compliance of the patients to drugs used in treatment of heart failure as well as decreasing Drug related problems improving adherence of patients to drugs using morisky scale and finally Ejection fraction of patients with heart failure treated with Multidisciplinary including clinical pharmacist increased significantly as well as psychological aspect improved and quality of life of those patients dramatically improved.

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