

# **The impact of pulmonary hypertension on the short term outcome of patients with cardiomyopathy**

## **INTRODUCTION**

Cardiomyopathies are a group of diseases that primarily affect the myocardium . Different cardiomyopathies have different causes and affect the heart in different ways.

Elevated pulmonary arterial pressure has been established as a predictor of morbidity in patients with heart failure with both ischemic and nonischemic cardiomyopathy. Whether PHT has the same prognostic value among the different types of nonischemic cardiomyopathy is unknown.

## **AIM OF THE WORK**

To evaluate the impact of pulmonary hypertension on the short term outcome of patients with cardiomyopathy

## **SUBJECTS AND METHODS**

### **Inclusion criteria**

We included All patients admitted to cardiology department either dilated cardiomyopathy (DCM) or ischemic cardiomyopathy (ICM) with or without pulmonary hypertension. We excluded

1- Patients with hypertrophic cardiomyopathy.

2- Patients with other causes of pulmonary hypertension e.g COPD, congenital heart disease...etc.

Transthoracic echocardiography examination was done Left ventricular end diastolic volume (LVEDV).

1- Left ventricular end systolic volume (LVESV).

2- Ejection fraction and fraction shortening will be calculated with modified biplane method of Simpson using the following equation:

$$LVEF = (LVEDV - LVESV) / LVEDV.$$

Patients was divided into 2 groups.

- **Group I** cardiomyopathy (dilated and ischemic) with pulmonary hypertension.
- **Group II** cardiomyopathy (dilated and ischemic) without pulmonary hypertension

We followed up the patients for one month later.

## **Results**

Fifty eight patients were included in the study. 28 had ischemic cardiomyopathy and 30 had dilated cardiomyopathy. They had mean age  $\pm$  SD of about  $52 \pm 17$  years. 25 patients had pulmonary hypertension with pulmonary systolic pressure  $46 \pm 8$  mmHg. 33 patients had normal systolic pulmonary pressure  $27 \pm 6$  mmHg. EF was  $24 \pm 7\%$  in group A with pulmonary hypertension and  $31 \pm 6\%$  in group B without pulmonary hypertension at the time of admission. After same medical treatment, there was significant difference between the 2 groups. EF in group A  $29 \pm 5\%$  while it became  $33 \pm 8\%$  in group B ( $p < 0.05$ ). Also, there was significant difference between EF in ICM & DCM patients ( $p < 0.05$ ). The mean duration of hospital stay was  $8 \pm 4$  days in group A and  $4 \pm 2$  days in group B.

## **Conclusion :**

The presence of pulmonary hypertension significantly affects the short term outcome of patients with cardiomyopathy. Patients without pulmonary hypertension at the time of admission have better improvement in EF and shorter duration of hospital stay and hence better short term prognosis.