

## A Case Report on Non Ischemic Dilated Cardiomyopathy

L.Devakar\*, Ritik Kashyap, Kumar Akash Saha, Amit Kumar

Department of Pharmacy Practice, Aditya College of Pharmacy, Surampalem, Andhra Pradesh, India

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## Corresponding Author:

L. Devakar

Pharm.D Intern

Department of Pharmacy Practice

Aditya College of Pharmacy

Surampalem, Andhra Pradesh, India.

E.mail id: vidyal2003@gmail.com

## ABSTRACT

Non-Ischemic Dilated Cardiomyopathy is a condition in which the dilation of left ventricle occurs. Due to this condition motor movement of the ventricles (contraction) of heart decreases which results in less efflux of oxygenated blood from the heart to the body. The clinical manifestations include chest pain, SOB, progressive dry cough, fatigue and restlessness. This is a case of 18yr male patient diagnosed as NIDCM with the above symptoms. His clinical findings (ECG, 2D ECHO) were abnormal and for the proper management of this case drugs like anti-hypertensive, inotropes, diuretics and anti-allergic were prescribed along with some non-pharmacological treatment.

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## Introduction

Non-Ischemic Dilated Cardiomyopathy (NIDCM) is a type of heart muscle disease that causes abnormal enlargement of left ventricle, that prevents the heart from pumping blood effectively and thus produces severe complications. The etiological factor of NIDCM is still unknown [1,2].

According to a study 40% of young individuals suffers from NIDCM and comparatively male population are more prone than females. In the early stages of NIDCM there might be no signs and symptoms but as the condition advances gradually signs and symptoms like breathlessness with activity or at rest, swelling of legs, cough while laying down, fatigue, rapid heartbeats along with chest discomfort, dizziness, lightheadedness and fainting are observed.

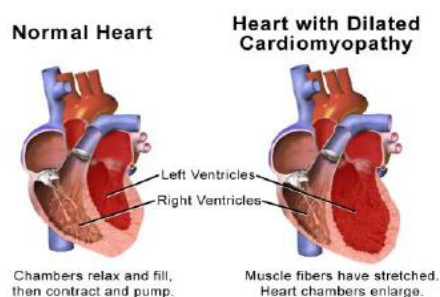


Fig.1: Comparison of normal heart with DCM heart

The risk of NIDCM is significantly higher in patients with long term high blood pressure, obesity, past heart attack, coronary artery disease or an infection in the heart [3-5].

## Case Report

A male patient of 18 years old was observed with the following chief complaints that includes progressive dry cough, shortness of breath, malaise and pain in lower limbs. The patient had a history of jaundice 1year ago and led him to drastic loss of weight. There were no complaints of fever, chest tightness and gastric pain. There is no past history of diabetes mellitus, hypertension, tuberculosis and hypothyroidism or hyperthyroidism. He doesn't have any past medication history and patient is a non-smoker and a non-alcoholic. The vitals of the patient were taken and demonstrated in table 1.

Table.1: Vitals

Vitals	Values
Blood pressure	140/110 mmHg
Pulse rate	108/min
Temperature	Afebrile
Respiratory rate	30/min

The doctor asked the patient to go for haematological test and ECG. The findings of the respective tests was found to be ST elevation and probable early repolarisation pattern, ventricular premature complex, probable left atrial enlargement and haematological results were found to be normal.

For further confirmation, the patient was suggested to do an 2D-ECHO and concluded as non-ischemic dilated cardiomyopathy with the following impressions

- Dilated LA, LV
- Global hypokinesia of LV
- Mild MR
- Mild PAH with Trivial TR
- LV non compaction

### Treatment

DRUG NAME	DRUG CATEGORY	DOSE	FREQUENCY	R.O.A
T.Carvedilol	Beta blocker	3.125mg	BD	Oral
T.Digoxin	Inotrope	0.125mg	5 times a week	Oral
T.Losartan	ARB	25mg	OD	Oral
T.Frusealac	Diuretic	70mg	OD	Oral
T.Monzet	Anti-Allergic	15mg	OD	Oral

### Discussion

The case highlights the severity of NIDCM in which the abnormal enlargement of left ventricle resulting SOB, progressive dry cough, chest pain, fatigue and restlessness were observed. The case doesn't have any genetical history. For the proper diagnosis of this case, haematological tests, 2D ECHO and ECG were performed. The ECG results involved elevation of the ST segment (probable normal early repolarisation pattern observed) and the 2D ECHO results demonstrated dilated LV, global hypokinesia of LV (decreased motor movement), moderate LV dysfunction, mild MR, mild PAH with trivial TR, LV Non compaction. After the assessment of the case, the proper treatment plan was prepared. The treatment involves use of drugs like anti-hypertensives (losartan), inotrope (digoxin), diuretics (furosemide), anti-allergic (Montelukast +Levocetizine). Along with these drugs non pharmacological treatment was also advised like less consumption of high cholesterol diet, salt and milk products. Heavy exercise, smoking and

alcohol consumption should not be done. Also the patient was advised to avoid stress condition.

### Conclusion

This case report suggested that regular use of prescribed medication along with the advised non pharmacological treatment (lifestyle modifications, dietary changes and precautionary measures) helps to suppress the severity of the condition. Also the patient should visit the concerned doctor for the regular follow up and must be adhered to the prescribed medications. Improper management of NIDCM can lead to other complications which may require further treatment. Hence, it should be treated at its early stage.

### Abbreviations

- 2D ECHO - Two Dimensional Echocardiography
- ARB - Angiotensin II Receptor Blocker
- BD - Twice in a day
- BP - Blood pressure
- DCM - Dilated Cardiomyopathy
- ECG - Electrocardiogram
- HTN - Hypertension
- LA - Left Atrium
- LV - Left Ventricle
- MR - Mitral Valve Regurgitation
- NIDCM - Non Ischemic Dilated Cardiomyopathy
- OD - Once in a day
- PAH - Pulmonary Arterial Hypertension
- TR - Tricuspid Valve Regurgitation

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