

Dilated Cardiomyopathy with Left Ventricular Failure

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Abstract

Case Report

Dilated cardiomyopathy (DCM) is a heart muscle disease characterized by left ventricular (LV) or biventricular dilation and systolic dysfunction in the absence of either pressure or volume overload or coronary artery disease sufficient enough to explain the dysfunction. Cardiomyopathies either are confined to the heart or are part of generalized systemic disorders, often leading to cardiovascular death or progressive heart failure (HF) related disability this case study is about the treatment of pathological heart and also monitoring interactions. DCM is usually a mostly genetically determined disease.

Keywords: Cardiomyopathy, left ventricular, biventricular, heart failure, cardiovascular.

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INTRODUCTION

Dilated cardiomyopathy is a disease of the heart muscle. It is often a genetic condition. This means that it's caused by a change (known as a mutation) in one or more genes that can be passed on through families [5]. Having dilated cardiomyopathy means that the left ventricle of heart becomes dilated (enlarged). This happens when heart can no longer pump blood efficiently around the body [1]. This can lead to fluid building up in your lungs, ankles, abdomen and other organs of the body and a feeling of being breathless. This collection of symptoms is known as heart failure. In most cases dilated cardiomyopathy develops slowly, so the heart can be quite severely affected before someone is diagnosed [7]. In some cases, there may also be mitral regurgitation. This is when some of the blood flows in the wrong direction through the mitral valve, from the left ventricle to the left atrium [2]. The exact reason for dilated cardiomyopathy is unknown and the condition is called 'idiopathic dilated cardiomyopathy'. Idiopathic means that there is no known cause [6]. Gene mutations that are known to affect the development of heart muscle, and that may cause dilated cardiomyopathy [3]. However, there are many other gene mutations that may also cause the condition. Some non-genetic factors are also linked to an increased risk of developing dilated cardiomyopathy. These include:

- viral infections
- auto-immune disease
- exposure to toxins (including alcohol) or certain medicines

- Pregnancy [4].

In some people with dilated cardiomyopathy there may be more than one reason to explain their condition. For example, some people may carry a gene mutation that makes them more vulnerable to viral infections in the heart [8].

CASE REPORT

A male patient of age 70 years was admitted in KGH with chief complaints of shortness of breath class 4 since 5 days associated with excretion, orthopnoea, facial swelling and constipation. He has history of left ventricular failure with Mitral regurgitation. On laboratory investigation he was found to have increased ESR and serum creatinine levels. He is diagnosed as dilated cardiomyopathy with left ventricular failure. He is a known smoker and alcoholic and his family has no history of dilated cardiomyopathy. He was given Inj. Lasix 40mg IV TID, T. Digoxin 0.25mg PO OD, T. Pantop 40mg PO OD, Syp. Duphalac 30mL PO H/S, T. Ecospirin gold (aspirin-75mg + atorvastatin-10mg + clopidogrel-75mg) PO OD, T. Enalapril 2.5mg PO OD, Duolin inhalation for every 8 hours, T. Dolo 650mg PO SOS. Patient condition became apparently normal after week days and discharged on the next day with the same medication.

DISCUSSION

As the patient's myocardium is not healthy (dilated) it affects the pump function or contractility function of myocardium leads to heart failure. Inj.lasix

is given to treat fluid retention, tab.digoxin is prescribed to treat irregular heartbeats, tab pantop is used for heart burn, Syp Duphalac is used to treat chronic constipation, Tab.ecospirin gold is prescribed to prevent heart attack, Tab. Enalapril is used to treat heart failure, Duolin used to treat shortness of breath. Although these drugs have good therapeutic signs yet there are few drug interactions which are followed:

1. Tab.pantop + Digoxin = Pantoprazole will increase the level of digoxin by increasing gastric PH
2. Enalapril + Inj. Lasix = pharmacodynamic synergism
3. Enalapril + Digoxin- enalapril increases the levels of digoxin.
4. Digoxin + Furosemide - pharmacodynamic synergism.

CONCLUSION

Cardiomyopathy is often associated with heart failure. Dilated cardiomyopathy is not curable, but most symptoms caused by the condition can be controlled using medicines. As there are major drug interactions in the prescription given time gap must be maintained between intake of each drug and vitals must be monitored frequently.

ETHICAL APPROVAL

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AUTHORS CONTRIBUTION

All the authors contributed work equally.

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