



# **A Case Report on Ischemic Dilated Cardiomyopathy with Compensated Alcoholic Liver Disease with Acute Pancreatitis and Right Sided Pleural Effusion**

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## **Author's contribution**

The sole author designed, analyzed, interpreted and prepared the manuscript.

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**Case Report**

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## **ABSTRACT**

**Introduction:** Ischemic heart disease is the most common cause of dilated cardiomyopathy. In ischemic heart disease, the capability of the coronary heart to pump blood is reduced due to the fact that the principle pumping chamber of the heart, the left ventricle, is enlarged and dilated. This is due to a loss of blood supply to the heart muscles due to coronary artery disorder. This condition is sometimes referred to as dilated cardiomyopathy.

**Clinical Finding:** shortness of breath since 3 months, dry cough, loss of appetite, loss of weight (Weight 50 Kg), lower limb swelling, increased frequency of stools since 3 months.

**Diagnostic Evaluation:** chest x-ray right hydropneumothorax, ECG QS complexes in V1, V2, V3, 2 D Echo ejection fraction 15%, all chambers dilated, poor biventricular systolic function, mild mitral regurgitation, tricuspid regurgitation.

USG for liver mild hepatomegaly, USG for thorax gross pleural effusion on right side, CECT Abdomen bulky tail of pancreas, right side pleural effusion with collapse of underlying lung.

**Therapeutic Intervention:** Patient was treated with diuretics, alpha and beta-blocker, angiotensin receptor, Antibiotic, protein powder and supportive treatment and intercostals chest drainage was done.

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**Outcome:** pleural tapping was done. Patient general condition was poor with breathlessness.  
**Conclusion:** This situation indicates the subsequent mental impact at the affected person, as well as on career and family. After getting appropriate treatment patients symptoms relived and the progression of heart failure slowed down.

*Keywords: Dilated Cardiomyopathy; Alcoholic Cardiomyopathy; Drainage; pleural effusion; Alcoholic Liver disease; Lung Collapse.*

## 1. INTRODUCTION

Ischemic heart disease is the most common cause of dilated cardiomyopathy. In Ischemic heart disease, the capability of the heart to pump blood is reduced due to the fact that the principle pumping chamber of the coronary heart, the left ventricle, is enlarged and dilated. This is due to a loss of blood supply to the heart muscle due to coronary artery disorder. This condition is sometimes referred to as dilated cardiomyopathy [1]. Alcoholic cardiomyopathy is a type of alcohol abuse-induced heart disease. The misuse of lengthy-time period alcohol weakens and thins the heart muscle, affecting its blood pumping capacity. When heart does not effectively pump blood, the loss of blood supply disrupts all the main functions of your body. This can lead to heart failure and other health issues that could be life-threatening [2]. Alcoholic cardiomyopathy is most frequent in men aged 35 to 50, although women can also be affected by the disease. People with alcoholic cardiomyopathy also have a history of drinking excessively and for a long time, typically between the ages of five and 15. Alcoholic cardiomyopathy does not necessarily cause signs of heart disease to occur. These normally involve tiredness, breathlessness, and peripheral oedema [3]. Toxicity caused by alcohol leads to non-ischemic dilated cardiomyopathy marked by lack of contractile control and myocardial ventricle dilatation. These effects are combined with a personal history of heavy alcohol consumption as a positive etiology in the absence of coronary heart disease [4]. Increased myocardial mass and volume are typical of dilated cardiomyopathy. The ventricular wall becomes thin and prolonged, thus weakening cardiac contractility and contributing to poor ventricular function [5]. AHA indexed cardiomyopathies as primary (i.e. inherited, combined or received) or secondary (e.g. infiltrative, poisonous, inflammatory). Dilated cardiomyopathy, hypertrophic cardiomyopathy, restrictive cardiomyopathy, and arrhythmogenic proper ventricular cardiomyopathy are the four essential styles of cardiomyopathy [6].

## 2. CASE PRESENTATION

**Patient history:** A 41-year-old male patient was admitted to AVBRH on dated 25/01/2021 with the chief complaints of breathlessness since 3 months, fever, dry cough, loss of appetite, loss of weight (loss weight 3-4 kg), lower limb swelling, increased the frequency of stool since 3 months. After check-up, doctor diagnose the case was ischemic dilated cardiomyopathy with compensated alcoholic disease with acute pancreatitis with right sided pleural effusion.

**Patients specific information:** A male patient 41 year old was chronic alcoholic and tobacco chewer since 15 years. Patient was apparently alright before 3 months. Then the problem started with shortness of breath, he also had fever which was low grade and intermittent, dry cough, loss of appetite, and loss of weight approximately 3-4 kg, since 3 month. Patient also had swelling over lower limb extending up to 1/3 of leg. Patient also complained of increased frequency of stool which were bulky and float on water. Patient had taken treatment from outside hospital twice and pleural tapping was done twice. Approximately 2 litres of pleural fluid was removed and later patient was referred to AVBRH for further management.

**Primary concerns and symptoms of the patient:** This 41 year old male patient visited to AVBR hospital OPD on date 25/01/2021 with chief complaint of shortness of breath, fever which was low grade and intermittent, dry cough, loss of appetite, and loss of weight approximately 3-4 kg, since 3 months. Patient also had swelling over lower limb, patient also complained of increased frequency of stool which were bulky and float on water.

**Medical, family, and psycho-social history:** A male patient 41 year old is chronic alcoholic and tobacco chewer since 15 years. Patient was taken treatment from outside hospital twice and pleural tapping was done twice approximately 2 litre of pleural fluid was removed. In family history he is belong to nuclear family and he mentally

stable, conscious and oriented. He was maintain the good relationship with doctors and nurses as well as with other patients also.

**Relevant past intervention with outcomes:** This patient was diagnosed with ischemic dilated cardiomyopathy with compensated alcoholic disease with acute pancreatitis with right sided pleural effusion. He was admitted to a private hospital for treatment of the disease. But improvement was not satisfactory.

## 2.1 Clinical Findings

### 2.1.1 General examination

State of health: Unhealthy  
State of consciousness: Conscious  
Body built: Thin  
Breath order: Absent  
Hygiene: Good

### 2.1.2 General parameter

Height: 160 cm  
Weight: 50 kg

### 2.1.3 Vital parameters

Blood pressure: 110/90 mm Hg  
Temperature: Afebrile 98.4° F  
Pulse: 90 beats/min.  
Respiration: 20 breath/ min.

### 2.1.4 Systemic examination

Respiratory system: right sided decrease breath sounds  
Cardiovascular system: S1 and S2 heard, No murmur  
Central nervous system: conscious and oriented, no focal neurological deficit

### 2.1.5 Abdominal examination

Soft and non-tender, no organomegaly

## 2.2 Diagnostic Assessment

Patient had undergone Clinical Examination, Systemic examination, USG and other Blood investigations. He was diagnosed having ischemic dilated cardiomyopathy with compensated alcoholic disease with acute pancreatitis and right sided pleural effusion.

Chest x-ray revealed right hydropneumothorax. ECG showed QS complexes in V1, V2, V3, 2 D Echo ejection fraction 15%, all chambers dilated, poor biventricular systolic function, mild mitral regurgitation, tricuspid valve regurgitation. USG Abdomen revealed dilated inferior vena cava, liver parenchymal disease, moderate ascites and bilateral pleural effusion. USG for liver mild hepatomegaly, USG for thorax gross pleural effusion on right side. CECT Abdomen showed bulky tail of pancreas, right side pleural effusion with collapse of underlying lung. Pleural Fluid cytology reported that smear are cellular and shows mesothelial cell proliferation, lymphocytes with few neutrophils. Growth of staphylococcus hemolyticus. Sputum test was Negative; 2D Echocardiography showed dilated cardiomyopathy with secondary poor systolic function, ejection fraction was 15%. CBC Investigation WBC-2-3 cells/HPF, TLC- 442 cells/cu mm, DLC-Polymorphs-60%, Lymphocytes-40%

**Lipid Profile:** Total cholesterol- 117, Triglyceride-68, HDL-31, LDL-73, VLDL-14

## 2.3 Therapeutic Intervention

Medical management: Inj. Augmentin 1.2 gm TDS, Inj. Metro 500 mg TDS, Inj. Octreotide 25 gm TDS, Tab. Ciplox 600 mg BD, Tab. Cardivas 3.45 half BD, Tab. Lasilactone (20/50) half OD, Tab. Cidmus 50 mg BD. Tab. Zincovit OD, Syp. Cheston plus 10 ml BD, Syp. Aptivate 10 ml BD, Syp. Liv 52 10 ml BD, Soya protein powder 2 tsp TDS.

## 3. DISCUSSION

This 41 years old male was admitted in AVBRH on dated 21/01/2021 with the chief complaints of breathlessness since 3 months, fever, dry cough, loss of appetite, loss of weight (loss weight 3-4 kg), lower limb swelling, with ischemic dilated cardiomyopathy with compensated alcoholic disease with acute pancreatitis with right sided pleural effusion for further management after taking treatment the patient has been totally abstained from alcohol since 3 months. Patients got relieved of symptoms and the progression of heart failure slowed down.

It can be difficult to differentiate between alcohol-induced cardiomyopathy and dilated cardiomyopathy owing to other factors (e.g., idiopathic or viral). Patients of dilated cardiomyopathy have a history of alcohol intake

and histological variations in both diseases are non-specific. Teragaki et. al. reviewed the clinical and histological outcomes of patients with cardiomyopathy and essential alcohol use relative to patients with cardiomyopathy and no alcohol consumption. Histologically, myocyte fibrosis and nuclear changes have been proven to be less essential, whereas left ventricular dysfunction had a greater capacity for clinical reversibility in patients whose alcohol misuse was consistent with cardiomyopathy [7].

Heart failure stays a major cause of morbidity and mortality with growing prevalence of cardiomyopathies and valvular related disease, which leaves a profound impact on life of sufferer and also their carers [8].

One of the leading causes of myocardial injury is alcoholism. Alcoholic cardiomyopathy is caused by long-term alcohol consumption, comprising round 3.8 percent of all cases of cardiomyopathy. Alcoholic cardiomyopathy development and pathophysiology are complicated and include adjustments in many aspects of myocyte characteristic. Symptomatic Alcoholic Cardiomyopathy stage is characterised by extreme LV dilation, elevated LV mass, wall thinning, systolic dysfunction, signs and symptoms of heart failure. Treatment of these patients should require alcohol withdrawal and prescribed pharmacotherapy for cardiac disease. Many studies on cardiovascular problems are reported [9-10]. Related studies by Patel et al. [11] and Khatib et. al. Lalwani et al. [12-13] were reviewed [14-17].

#### 4. CONCLUSION

This case illustrates the successful outcomes of heart disease after proper care and treatment and abstinence of alcohol by patient. After getting appropriate treatment patients symptoms were relieved and the progression of heart failure slowed down.

#### DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by

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#### CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline patients consent and ethical approval has been collected and preserved by the authors.

#### COMPETING INTERESTS

Author has declared that no competing interests exist.

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