

# **PULMONARY HYPERTENSION CASE STUDY**

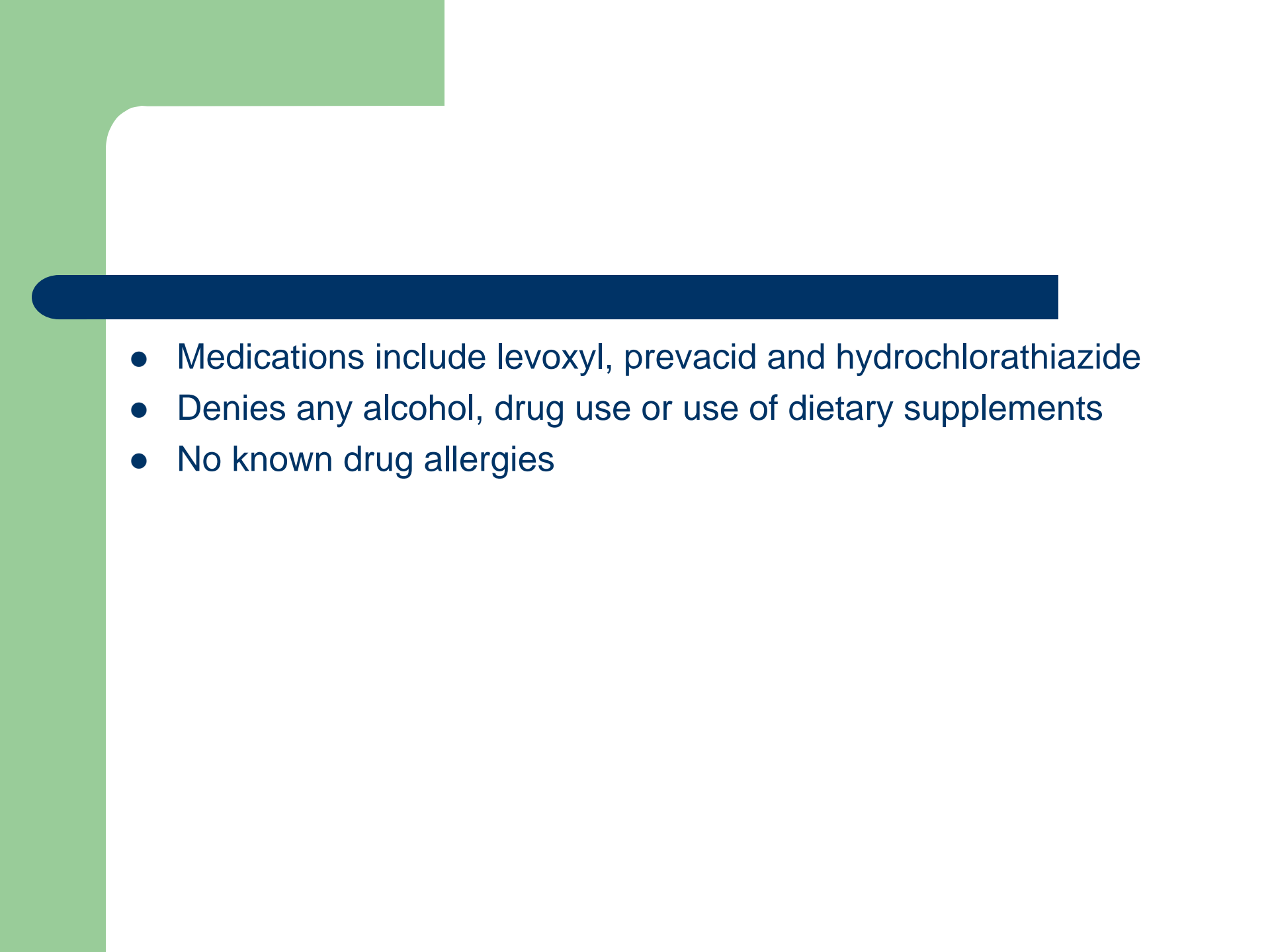
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Pulmonary Hypertension and Lung Transplant

# History

54 year old female with a past medical history of hypertension and hyperthyroidism who presented to our office in March 2009 with a complaint of progressive shortness of breath. She stated she was in her usual state of health In the summer of 2008 she began to notice occasional shortness of breath with exertion. She admits to being fairly active, going to the gym several time per week as well as playing golf. She was initially seen by her PMD and was prescribed bronchodilators. When her symptoms progressively worsened to include weakness, occasional lightheadedness with extreme exertion, she was referred to a cardiologist and pulmonologist for futher evaluation

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- Medications include levoxyl, prevacid and hydrochlorathiazide
  - Denies any alcohol, drug use or use of dietary supplements
  - No known drug allergies

# Social History

She admits to a 15 pack year smoking history in which she stopped in 1987.

Married with 2 daughters

She is employed as a tollbooth collector for the past 33 years

# Physical Exam

Gen: thin female pleasant

Vitals: BP 142/92 P 82 O2 sat 95% on RA BMI 22

HEENT: unremarkable

Lungs: clear

Cardio: regular rate and rhythm

Abd: soft, NT ND

Ext: no edema or cyanosis, warm

6MWT: ambulated 330 meters with an oxygen desaturation of 84 % after the first 4 minutes

# Diagnostic Testing

## Pulmonary Function Test

FEV1: 3L (127% predicted)

FVC: 3.37L (130% predicted)

FEV1/FVC: 80% predicted

TLC: 5.71L (126% predicted)

DLCO: 98%

IMP: No obstructive or restrictive defect with a normal diffusing capacity

## **Echocardiogram**

RVSP estimated at 76mmHg, right ventricular dilatation with right ventricular hypokinesis

Normal LV size and function

## **Right Heart Catheterization**

RA 6mmHg

CO: 4.12 L/min

wedge: 9mmHg

RV 60/2

CI: 3.10 L/min

PA 54/21

PVR: 922

**Left Heart Catheterization: normal coronaries**

**CT scan chest:** normal with no evidence of pulmonary embolism

**V/Q scan:** low probability for thromboembolic disease

**Labs:** CMP, CBC, Hepatitis panel, HIV, ANA, ESR and RF all within normal range

# Assessment and Plan

54 year old female with pulmonary aeterial hypertension WHO group 1 (idiopathic) NYHA class 2

- Plan:
1. Ambisentan 5 mg once daily was prescribed and increased to 10mg daily one month later
  2. enrollment in an outpatient pulmonary rehab program
  3. Oxygen therapy 2 liters

## Follow Up

Repeat 6MWT June 2009: Patient ambulated 440 meters with an oxygen desaturation to 84%