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Uncommon Cause of Asthma like Presentation.

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ABSTRACT

Wheeze is common presentation in obstructive pulmonary diseases. Many conditions mimics like asthma due to audible wheeze and misleads diagnosis. Appropriate clinical history and investigations can help in diagnosis. We are presenting case of old age lady presented with asthma like symptoms and signs. Patient was not responding to conventional asthma therapy and landed in multiple admission in early morning due to breathlessness. Patients symptoms are not controlled even on highest possible Asthma drugs doses. This leads us to uncommon diagnosis which present like Asthma.

Keywords: Flash pulmonary oedema (FPO) , Asthma , renal artery stenosis

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INTRODUCTION

Wheeze is common presentation in obstructive pulmonary diseases. Many conditions mimics like asthma due to audible wheeze and misleads diagnosis. Appropriate clinical history and investigations can help in diagnosis. We are presenting case of old age lady presented with asthma like symptoms and signs. Patient was not responding to conventional asthma therapy and landed in multiple admission in early morning due to breathlessness. Patients symptoms are not controlled even on highest possible Asthma drugs doses. This leads us to uncommon diagnosis which present like Asthma.

Flash pulmonary edema and acute pulmonary edema are terms used to define the sudden development of respiratory distress related to the rapid accumulation of fluid within the lung interstitium secondary to elevated cardiac filling pressures (Little, & Braunwald, 1997). Pickering reported 11 patients presented with flash pulmonary edema with hypertension bilateral atheromatous renovascular diseases[1]. Overall the weighted prevalence of FPO in patients with RAS was 15.3%. In patients with bilateral RAS the weighted prevalence of FPO was 14.3% compared with 3.5% in those with unilateral IRAS[2].

Case History

A 75-year-old female nonsmoker without significant past history presented to hospital with acute shortness of breath and chest tightness. She refuse similar episodes in past. Every breathlessness episode was noted early in the morning after making strain for passing stool. Patient was treated on outpatient basis with diagnosis of Bronchial asthma During every episode patient had tachypnoea, tachycardia and severe increase in blood pressure more than 200/100 mmHg, on auscultation polyphonic rhonchi were audible. Patient episodes were recurrent and non responding to conventional asthma treatment with high dose of inhaled and systemic steroids. Patient responded slowly to treatment. Patient was discharged with Oral steroids, Salmeterol plus inhaled steroids with Tab Furosimide after partial improvement. Patient was referred to our institute as difficult to treat asthma.

Patient was admitted with provisional diagnosis of Asthma and treated with systemic steroids nebulisation with Short acting beta-2 agonist and loop diuretics given for hypertension with amlodipine 5 mg stat.

Patients all blood reports including Haemogram: Haemoglobin : 13 gm/dl, Total WBC count : 19300 /cmm, PLT: 256000/mcc, Na: 143.3 meq/dL, Potassium: 4.65 meq/dL, BUN: 33.7 mg/dL, Creatinine: 1.5 mg/dL Glucose: 147 mg/dL . Patient is unable to perform Spirometry and 2D ECHO s/o inferior and posterior lateral walls are severely hypokinetic with left ventricular ejection fraction 35%. X ray chest s/o blunting of CP angles (Figure 1), AS x ray s/o bilateral pleural effusion which is uncommon in bronchial asthma HRCT chest was performed. CT chest s/o Bilateral GGH and bilateral pleural effusion (Figure 2).



Fig 1

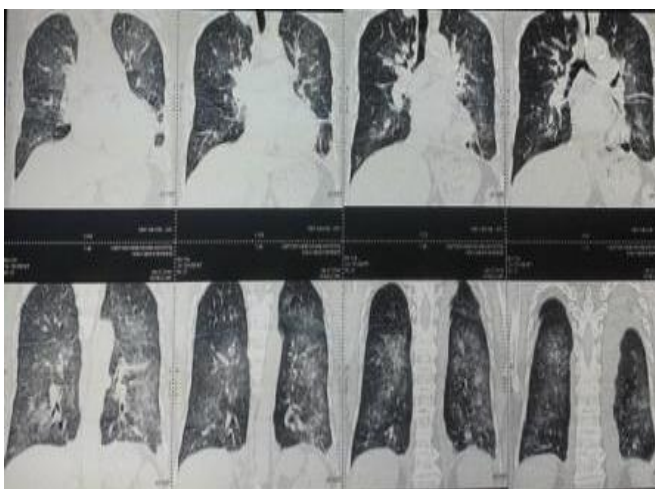
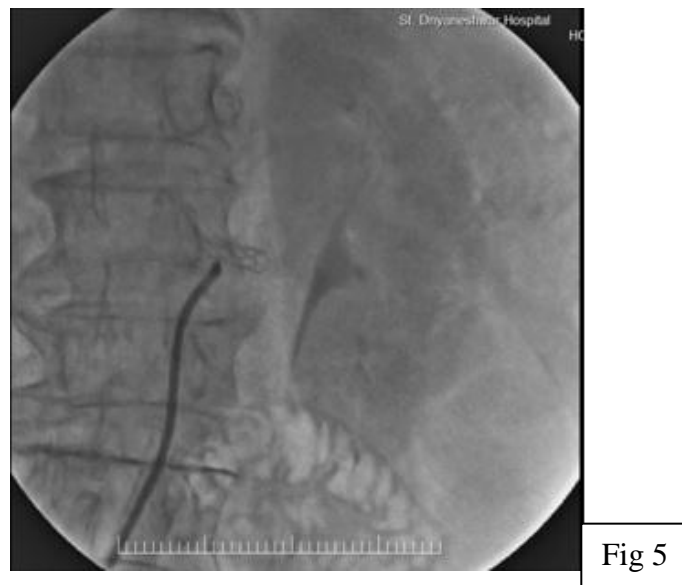
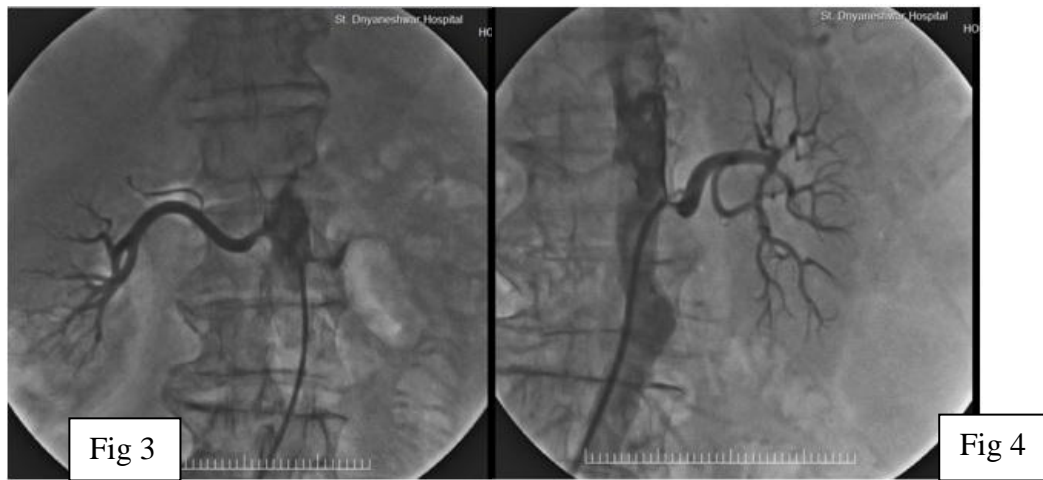


Fig 2

Patient was managed initially with oxygen non rebreathing mask with blood pressure, pulse oxymeter and blood gas analysis. Flash Pulmonary oedema was treated with conventional treatment by non-invasive bipap ventilation with success. Nitroglycerin, and furosemide Medications commonly used in the treatment of flash pulmonary edema secondary to hypertension. Altogether she had three admissions in last one month. In view of the fact that the development of breathlessness was sudden and the recovery rather quick coupled with mild elevation of renal parameters suspected that the patient might be having renal artery stenosis. She was investigated for the same including ultrasound abdomen, Doppler of the renal arteries and coronary and renal angiography. The ultrasound examination of the abdomen and Doppler examination of the renal arteries were inconclusive.. The renal angiography showed critical 90%lesion of left renal artery and 60% lesion of right renal artery

(Figure 3 and 4). Decision of renal artery stent (Figure 5) placement was done. Patient completely responded to intervention with complete symptom relief.



High clinical suspicion as every episode had accelerated hypertension, abnormal chest imaging and angiography leads to diagnosis of bilateral renal artery stenosis leading to flash pulmonary edema.

DISCUSSION

Flash pulmonary edema and acute pulmonary edema are terms used to define the sudden development of respiratory distress related to the rapid accumulation of fluid within the lung interstitium secondary to elevated cardiac filling pressures (Little, & Braunwald, 1997).However endothelial dysfunction possibly secondary to an excessive activity of rennin-angiotensin-aldosterone system, impaired nitric oxide



synthesis, increased endothelin levels, and/or excessive circulating catecholamines may cause excessive pulmonary capillary permeability and facilitate FPE formation[3].

Flash pulmonary edema developed in minutes to seconds and can present as acute respiratory failure. One of the common triggering factor for FPO is making strain for passing stool early morning. Audible rhonchi on auscultation can misleads diagnosis towards bronchial asthma. Asthmatics patients also have early morning symptoms like breathlessness, chest tightness and rhonchi. Other clinical symptoms and signs can help in proper diagnosis of FPO.

Aim of treating FPO is to prevent respiratory failure and hypoxemia and treat underlying cause like Renal artery stenosis and hypertensive crisis. Respiratory failure and hypoxemia can be treated by oxygen therapy by non rebreathing mask or in severe cases by non invasive ventilation.

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