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An Unusual Case Of Dyspnea.

Dr. Amit Daphale[1] , Dr. Surya Acharya[2] , Dr. Tanmay Gandhi[3] , Dr. Abhishek Gadge[4]
Daphale Hospital rukhmini nagar Amrawati

Sir,

A 40 year old male, non smoker non alcoholic, presented with complaints of breathlessness since 2 months, exaggerated since 15 days. Breathlessness was gradual in onset and progressive in nature from NYHA grade 2 to 3, with patient, at present, having breathlessness on less than ordinary activity.

Past history and family history was not contributory.

On examination pulse was 120/min, regular. His blood pressure was 130/80 mmHg in right arm supine position and respiratory rate of 18/min. All other system examination was normal.

ECG revealed right axis deviation. X-ray chest (PA view) was normal. Blood investigations were within normal limits. D-dimer was positive. Patient was also screened for DVT with lower limb doppler which showed no obvious abnormality. Serum homocystiene assay was normal. A 2D echocardiography was performed which revealed dilated right atrium, right ventricle and inferior vena cava and a hyper echoic oscillating filamentous mass of size 25 mm x 14 mm in right atrium probably thrombus. A CT Pulmonary angiography was suggested.

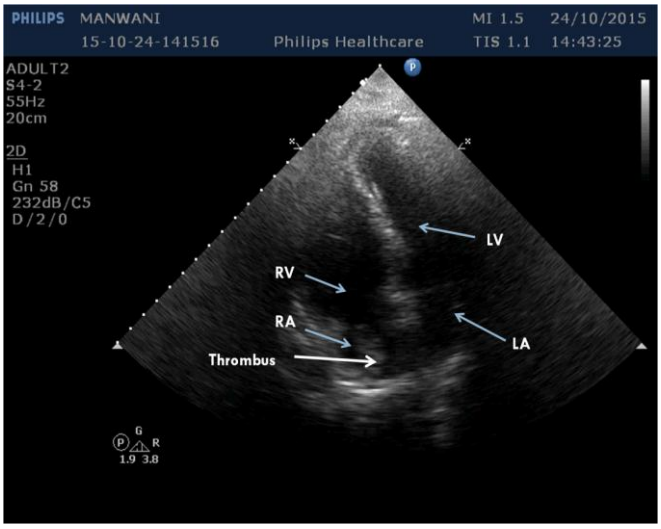

Fig 1; 2D Echo showing the thrombus.

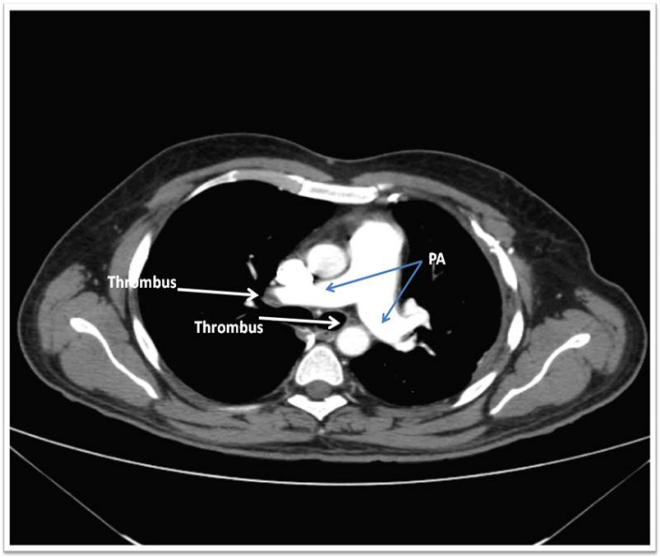

Figure 2: CT pulmonary angiography showing partially obstructive filling defect in left pulmonary artery.

A filling defect in upper lobe segmental artery and segmental artery of posterior branch of lower branch of right lung Mild compensatory

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hyperinflation of right lung suggesting pulmonary embolism. Due to lack of surgical expertise the patient was thrombolysed with 30 mg bolus of Tenecteplase. After the thrombolysis treatment a repeat TTE showed decrease in size of the thrombus. Then patient was started with unfractionated heparin which was overlapped with warfarin therapy. Two weeks after follow up repeat TTE showed dissolution of thrombus. Patient was asymptomatic and was advised to continue warfarin for 6 months with repeated INR testing intermittently as per protocol and to get a thrombophilia profile done to after 6 months.

Discussion:

Pulmonary embolism (PE) is serious life threatening condition estimated to cause 100,000 to 180,000 deaths annually. It is commonly caused secondary to deep vein thrombosis. Rest of the PE arise from other veins or right cardiac chambers, but are uncommon unless some inciting factors like atrial fibrillation, indwelling IV catheters or intracavitary pacing wires are present. Right heart thrombus (RHT) with PE constitutes a therapeutic emergency with a mortality of almost 100% in untreated patients and approximately 27.1% among treated patients. [1]

This case was rare presentation of PE secondary to mobile RA thrombus. In patients with a mobile right heart thrombus, the incidence of pulmonary embolism is 97% and reported mortality is over 44%. Investigators have recommended either urgent surgical treatment or thrombolysis of the thrombus, although prospective data of optimal treatment are lacking. The cause of the right atrial thrombus ,in this case, could not be evaluated. However, hypercoagulable states could not be ruled out, for which patients should be advised for thrombophilia profile 6 months after resolution of thrombus.

The classical treatment of PE due to right atrial thrombus is right heart exploration with pulmonary embolectomy. Surgery has got its own calculated risks in form of lack of availability of surgical expertise, delay while preparing for surgery, depressant effects of anesthetic drugs and cardioplegia, and the inability to remove co-existing peripheral pulmonary thrombi. On the other hand, thrombolytic therapy is a simple, quick, readily available therapy. A meta-analysis of 177 patients with RHT and PE suggested that thrombolytic therapy may be better than surgery (mortality rate 11.3% versus 23.8%). [1, 2]

We successfully treated our case with thrombolysis.

References:

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