

## Pulmonary embolism (PE) presenting as recurrent paroxysmal supraventricular tachycardia (PSVT) in an elderly female: A case report

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### Abstract

Pulmonary embolism (PE) usually has multiple presentations. Arrhythmias as sole manifestation of PE is usually rare. In elderly population arrhythmias with PE are usually blamed on concomitant coronary artery disease (CAD). We present a case of a 75 year old lady who presented with recurrent PSVT and was subsequently diagnosed as PE.

**Keywords:** PE, CAD, PSVT

### Introduction

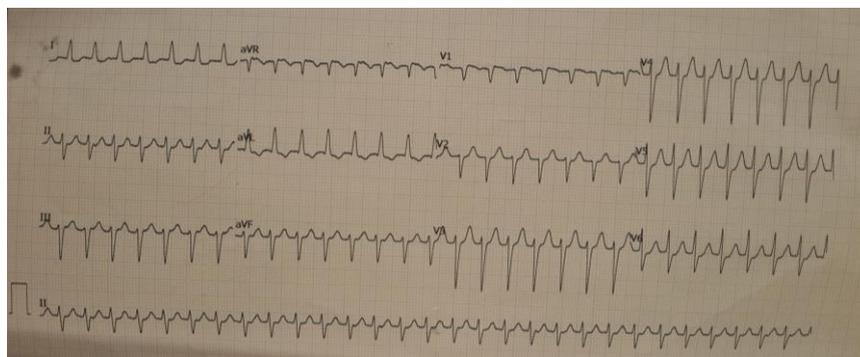
Atrial tachyarrhythmias occur in ~4%–14% of patients presenting with pulmonary embolism (PE).<sup>(1,2)</sup> The most common is sinus tachycardia. Other atrial arrhythmias are atrial tachycardia (AT), atrial fibrillation (AF), and atrial flutter (AFI), in that order.<sup>(1,2)</sup> The delay in diagnosis usually increases the mortality. Approximately 30% of patients die if appropriate treatment is not provided.<sup>(3)</sup> This report highlights the need for a high index of PE suspicion when PSVT is the only presentation of PE.

### Case Report

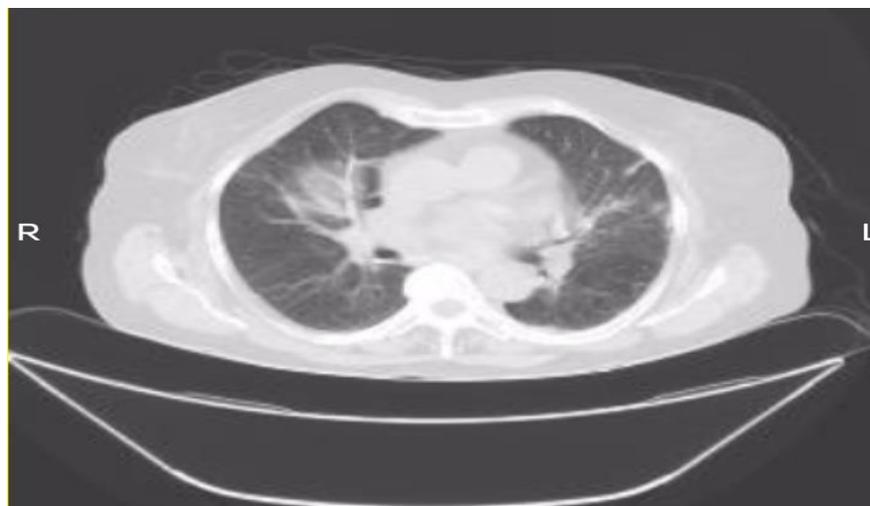
A 75 years old female presented to us with complains of dyspnea on exertion since one and half months, intermittent chest pain not related to exertion and intermittent palpitations since 15 days. The chest pain coincided with episodes of palpitations, which started abruptly and used to end suddenly. There was no history of orthopnoea, PND, hemoptysis, nocturnal cough, or edema feet.

On examination, pulse was 78/min regular, blood pressure-110/70 mm Hg, JVP was normal, CVS examination was normal, and other system examination was also normal. On investigations CBC, KFT, LFT, RBS were normal CXR was normal. ECG showed sinus rhythm without any ST-T changes. Coronary angiogram revealed normal coronaries. On day 2 of admission, patient suddenly complained of palpitations, cardiac monitor showed PSVT pattern which was confirmed on 12 lead ECG (Fig. 1). In subsequent two days four episodes of PSVT occurred which were controlled by intravenous adenosine. Then the patient was put on Tab. Diltiazem 90 mg per day. In view of persistent dyspnoea a D-Dimer was done, which was 450 IU. CT pulmonary angiogram was advised which revealed pulmonary embolism (Fig. 2). Lower limb doppler didn't reveal any deep vein thrombosis.

The patient was put on unfractionated heparin for 5 days which was overlapped with oral warfarin dose adjusted to INR of 2. The condition of patient improved in first week, dyspnea decreased and there was no PSVT recorded. The patient was discharged and was awaiting follow up.



**Fig. 1**



**Fig. 2**

Thrombus in subsegmental branch of right lobar pulmonary artery with adjacent pulmonary infarct.

### Discussion

Atrial tachyarrhythmias are uncommon in PE. The rationale explanation is the atrial stretch from elevated right heart pressure from a PE that instigate atrial arrhythmias.<sup>(3)</sup>

PE is a medical emergency which requires early diagnosis and appropriate management. It has got multivariate clinical presentations, therefore high index of suspicion is required<sup>(4)</sup> especially when it presents in atypical ways like in our case. The diagnosis includes an astute history with apt clinical suspicion, meticulous physical examination and wherever necessary D-dimer testing and further confirmation with CT pulmonary angiogram.

The classic symptoms are dyspnea, pleuritic chest pain, cough, hemoptysis, palpitations, wheezings, and sometimes anginal pain, most common signs are tachycardia, tachypnea, diaphoresis, fever. Classical sings of loud P2, pleural frictions rub occurs in only 1-2% of cases.<sup>(3)</sup> Arrhythmias are rare presentation in PE, our patient was classical because she presented with PSVT.

### Conclusion

Occurrence of PSVT in PE is rare. High index of suspicion is required and wherever appropriate, D-Dimer testing should be done when all other causes are eliminated. So that appropriate treatment and delay of diagnosis won't increase the chance of mortality due to PE.

### References

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