

Pulmonary Embolism Following Covishield (ChADOx1 nCov-19) Vaccine: An Unusual Presentation

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Abstract: *Pulmonary embolism is a medical emergency. Most common risk factors-immobility, malignancy, pregnancy, surgery, cigarette smoking, hypertension, obesity and in Indian population hyperhomocysteinemia. COVID infection represents a prothrombotic state but introduction of COVID vaccines to a lesser extent increased the risk of unprovoked venous thrombosis and pulmonary thrombosis.*

Keywords: COVID vaccine, pulmonary embolism

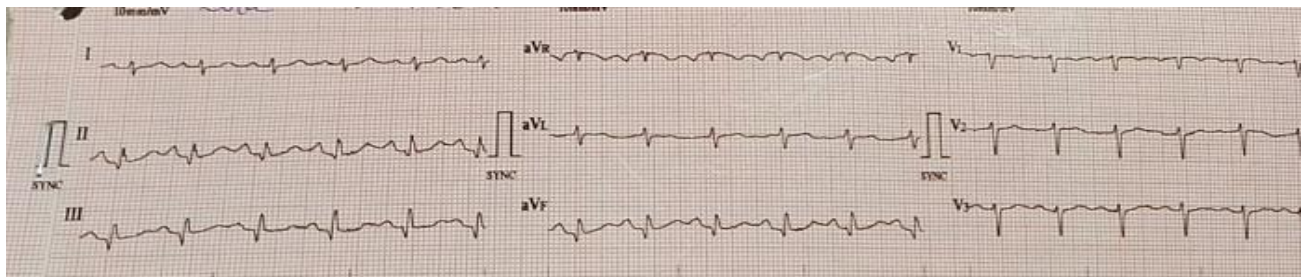
1. Introduction

Pulmonary embolism is a medical emergency. Most common risk factors-immobility, malignancy, pregnancy, surgery, cigarette smoking, hypertension, obesity and in Indian population hyperhomocysteinemia. COVID infection represents a prothrombotic state but introduction of COVID vaccines to a lesser extent increased the risk of unprovoked venous thrombosis and pulmonary thrombosis.

2. Material and Methods

We reported case of 60 years apparently healthy women with history of mild COVID19 infection one year ago with no comorbidities and not on any medications. Received first

dose of COVISHIELD (ChAdOx1nCoV-19) Vaccine on 9th September 2021. Within 1 weeks after vaccination she had mild symptoms like fatigue, mild headache and breathlessness on exertion. On 11th October 2021 she felt more dyspneic and visited a General Physician who noted high blood pressure-180/100 mmHg, ECG was normal and was prescribed a calcium channel blocker. Two days later she was severely out of breath while walking. She was taken to emergency department where her blood pressure was 180/90 mmHg, mild tachycardia, on auscultation chest was clear. ECG-S1Q3T3, mild tachycardia, O2 saturation was 79% on room air, 2D Echo was suggestive of possibility of pulmonary embolism as it showed normal LV function with dilated right ventricle and atrium.



3. Results

RT-PCR for COVID19 was negative. COVID 19Antibodies-4000All blood tests were normal. Normal platelet count. D-dimer was 8000 ng/ml. In order to rule out pre existing hyper coagulablestate Anti Beta-2Glycoprotein I-IgM, IgG Ab, AntiCardiolipin IgG, IgM Ab, Heparin/PF4 Ab were tested and found to be negative.

CT Pulmonary angiography-pulmonarythrombus involving bilateral hilar and segmental vessels-Pulmonary Embolism Bilateral lower limb venous doppler suggestive of thrombus in left popliteal vein.



The diagnosis was confirmed as post vaccination pulmonary embolism.

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Treatment:

Anticoagulant LMWH injections (80mg/day) for 15 days. The patient was stable and discharged after 15 days on oral anticoagulants (Tab Apixaban 5mgbd).

4. Conclusion

We highlight the need to suspect pulmonary embolism in patients presenting with hypoxia after COVID 19 vaccination.

5. Recommendation

Keeping high index of suspicion of thrombosis in immediate post vaccination patients and monitoring D Dimer will help early diagnosis and timely treatment of pulmonary embolism.

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