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Massive Pulmonary Embolism: How it looks in Imaging

Mridu Paban Nath*, **Rajib Kr. Bhattacharyya and Malavika Barman**

Gauhati Medical College Hospital, Guwahati, Assam, India

***Corresponding author:** Dr. Mridu Paban Nath, Assistant Professor & I/c Cadiao-thoracic Anesthesia, Gauhati Medical College Hospital, Guwahati, Assam, India, Tel: +91-7399003979; E-mail: drmridupaban@yahoo.com

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Case Details

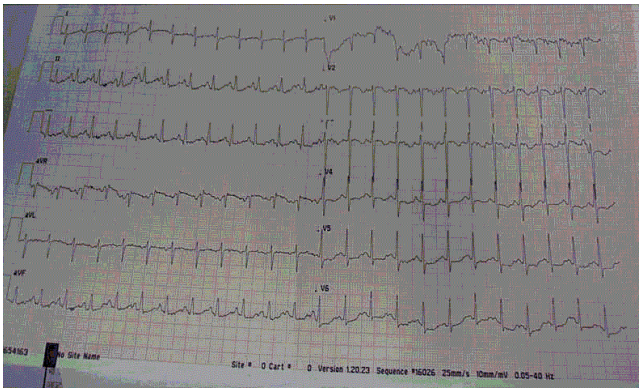

Figure 1: Preoperative ECG

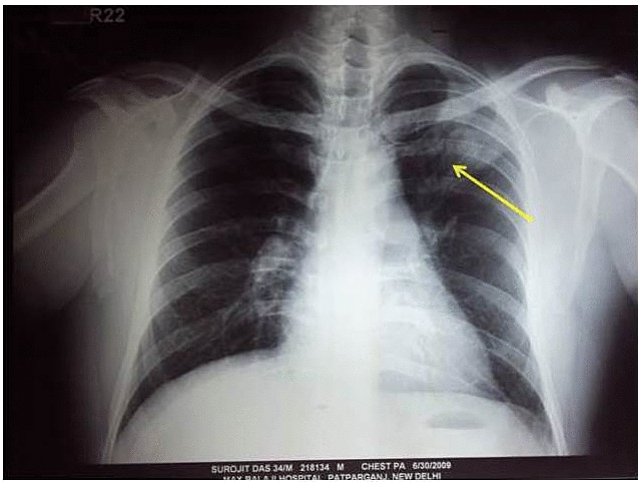

Figure 2: Chest x-ray showing opacity in upper zone of left lung

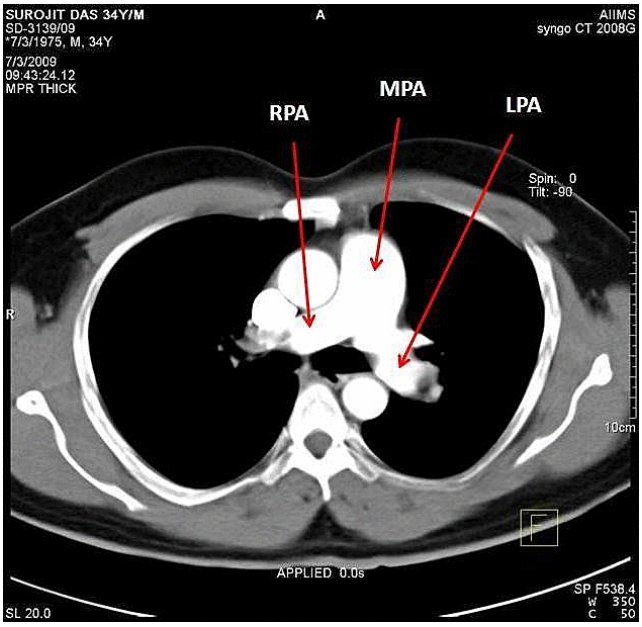

Figure 3: CT angiography showing that the MPA, proximal RPA and LPA are free of thrombi but showing thrombi as filling defects in distal parts of RPA and LPA

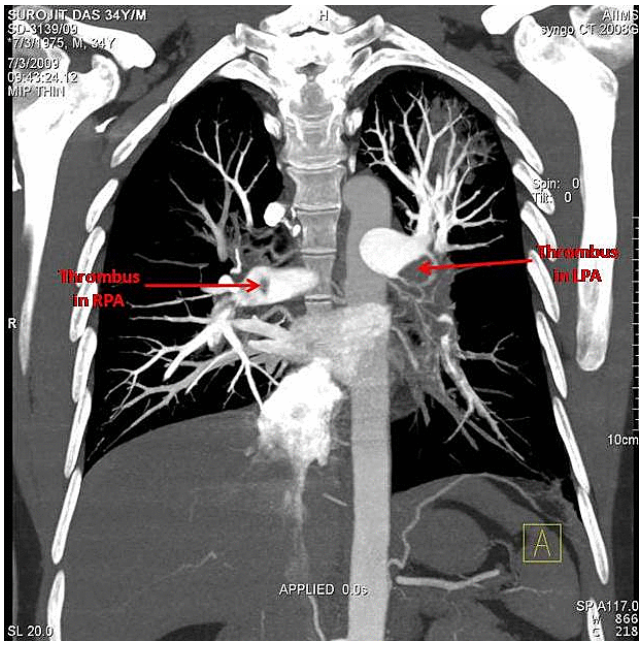

Figure 4: CT angiography showing filling defects representing thrombi in right and left pulmonary arteries extending into upper and lower segmental arteries.

A 34 year old man, presented in our emergency department with complaints of NYHA class-III dyspnoea, cough, palpitation, and left sided chest pain radiating to the back .The patient gave a history of trauma to the medial side of right lower limb after a road traffic accident one year ago followed by recurrent deep vein thrombosis for which he was treated with low molecular weight heparin (enoxaparin). At the time of hospital admission, patient was conscious and well oriented with a heart rate 96/min and blood pressure 130/94 mmHg. On physical examination, there were bilateral crepitation present with normal heart sounds and a pansystolic murmur in tricuspid area. ECG showed peaked p wave in lead II and S1Q3T3 pattern [Figure 1]. Arterial blood gas (ABG) analysis on room air showed pH 7.48, PaCO2 16.9 mmHg, PaO_2 47.7

mmHg, SaO2 87.7%, bicarbonate 12.9 mmol/L, base excess -6.3, PaO2/FIO_2 228 with normal haemogram and serum electrolytes. Chest radiography showed an opacity in left upper zone [Figure 2]. Transthoracic echocardiography revealed right atrial (RA) and right ventricular (RV) enlargement, moderate tricuspid regurgitation (TR) with gradient of 80 mmHg, RV dysfunction and normal left ventricular (LV) function without any intracardiac clot nor any thrombus could be visualized in proximal main pulmonary artery or right and left pulmonary arteries. Immediate supportive treatment was started with oxygen via face-mask, propped-up position, heparin infusion and injection furosemide. CT angiography [Figures 3,4] revealed thrombi as filling defects in right and left pulmonary arteries extending into upper and lower segmental arteries and left apico-posterior segmental infarcts with free main pulmonary artery and proximal part of right and left pulmonary arteries. After successful timely management leads to successful outcome of the patient.