

Pulmonary Tuberculosis With Rare Complication of Pulmonary Thromboembolism

KEYWORDS	Tuberculosis; Pulmonary Thromboembolism	
Dr.Sujeetha chandrababu		Dr.Senthil
Sri Ramachandra University,Chennai		Sri Ramachandra University,Chennai
Dr. Jayachandran		Dr.Sujatha
Sri Ramachandra University,Chennai		Sri Ramachandra University,Chennai

Introduction:

Tuberculosis continues to intimidate the human race since time immemorial note only due to its effects as a medical malady, but also by it impact as a social and economic tragedy. Tuberculosis is a major health problem in developing countries. Tuberculosis can have various presentations and complications. This case report is of a rare complication of tuberculosis causing pulmonary thromboembolism.

A case report:

A 62 yr old male presented to opd with complaints of loss of appetite and weight loss about 6kgs in last 20 days and complaints of cough with scanty expectoration since 10days . He also complained of breathlessness which worsened during exertion and relieved at rest for past 10 days. Patient is a known case of type 2 dm since 1yr on oral hyperglycemic agent's.on examination patient was febrile, pale.respiratory system examination revealed inspiratory crepitations in left chest.all the routine baseline investigations done which revealed elevated esr, other parameters were within normal limit. Chest x ray showed consolidation involving the left mid & lower zones thick walled irregular shaped cavity with surrounding mild fibrotic consolidation seen in left upper zone.sputum AFB was found to be positive (3+++). Ct thorax was in done view of persistent dyspnoea and hypoxia and showed f/s/o possibility of active tuberculosis along with chronic cavitatory sequalae. Thrombosis seen within the segmental branches supplying b/l lower lobe, left upper lobe and medial segment of right middle lobe. Bilateral lower limb Doppler was done and there was no evidence of DVT. HIV done was negative. Ddimer was elevated.following which patient was started on T.AKT-4 and low molecular weight heparin and three days later overlapped with warfarin, targeting for therapeutic range of INR and INR monitoring was done. Oral hypoglycemic agents were continued, patient improved after starting on heparin.

Discussion:

Tuberculosis is a major killer worldwide mainly affecting developing countries. This case shows bilateral pulmonary thromboembolism associated with pulmonary tuberculosis, but this association is very rare. However in tuberculosis , patient are predisposed to venous thromboembolism, due to several pathophysiological mechanisms involving all three parts of virchow's triad

- 1. Local invasion
- 2. Venous compression
- 3. Hyper coagulable satate.

There are several related studies supporting this phenomenon. The presence of hypercoagulable state in tuberculosis was postulated as consequence of elevated plasma fibrinogen with impaired fibrinolysis, decreased antithrombin iii, protein c, protein s and increased platelet aggregation and endothelial damage^{[3,4,5].}

These hemostatic changes will improve after the initiation of att during the first month. It should be started along with anticoagulant therapy to maintain the therapeutic range of INR. Generally higher doses of warfarin may be required. Because of the interference of rifampacin with p450 cytochrome.There is a higher incidence of deep vein thrombosis in these patients.

Conclusion:

In this case report we emphasise that patient with severe pulmonary tuberculosis are at a higher risk of developing thromboembolic diseases. Patients with tuberculosis who develop worsening dyspnoea not correlating with the lung parenchymal lesions and worsening hypoxia despite att, apart from well known complications such as pneumothorax, etc the possibility of pulmonary thrombosis/ embolic phenomenon should also be entertained. The risk benefits of anti coagulation in active tuberculosis should be weighed for long term theraphy.



1 consolidation involving the left mid & lower zones thick walled irregular shaped cavity with surrounding mild fibrotic consolidation seen in left upper zone

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2. Chronic cavitatory sequalae and thrombosis seen within the segmental branches supplying lower lobe and upper lobe.



3. Chronic cavitatory sequalae and thrombosis seen within the segmental branches supplying b/l lower lobe, left upper lobe and medial segment of right middle lobe.



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