

Case Report - Tuberculous Pseudoaneurysm of Descending Abdominal Aorta – Uncommon Presentation of a Common Illness.

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Abstract : In India, incidence of tuberculosis is very high. However Tuberculous pseudoaneurysm of aorta is an unusual entity, with only 100 cases reported till now and even less have been related to involvement of spine. Tuberculous aneurysms of the aorta are also highly susceptible to rupture. These complications are treatable, but may be fatal if not treated properly.

We in this case report, describe a case of tuberculous pseudoaneurysm of descending abdominal aorta associated with military tuberculosis and vertebral involvement.

Keywords: Tuberculosis, Pseudoaneurysm, Aorta.

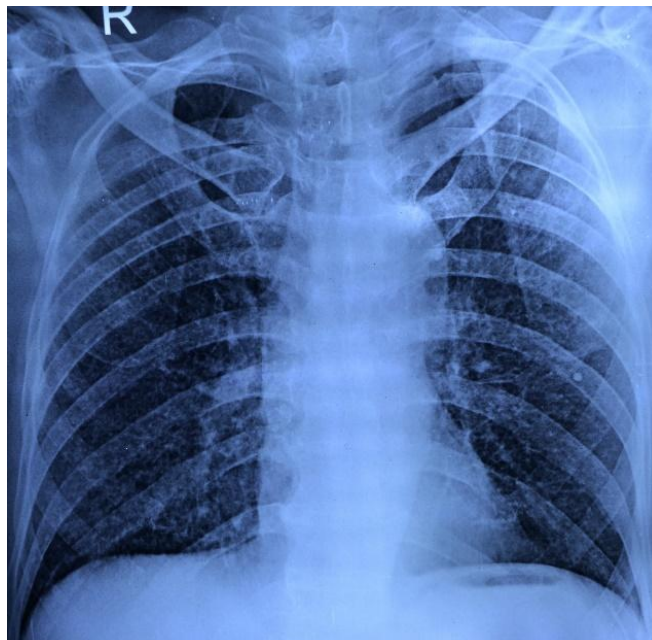
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I. Case Report

A 60 year old male patient initially had a complaint of fever with chills & evening rise of temperature since 15 days for which he took antipyretics by himself. Subsequently, he developed difficulty in speech, decreased urine output, generalised weakness and altered sensorium. He was admitted and routine blood investigations, Chest XRay, CSF Routine Microscopy, ADA levels, Lactate, Gene expert for TB were done.

Chest X ray revealed presence of multiple tiny nodular opacities randomly scattered in bilateral lung fields.

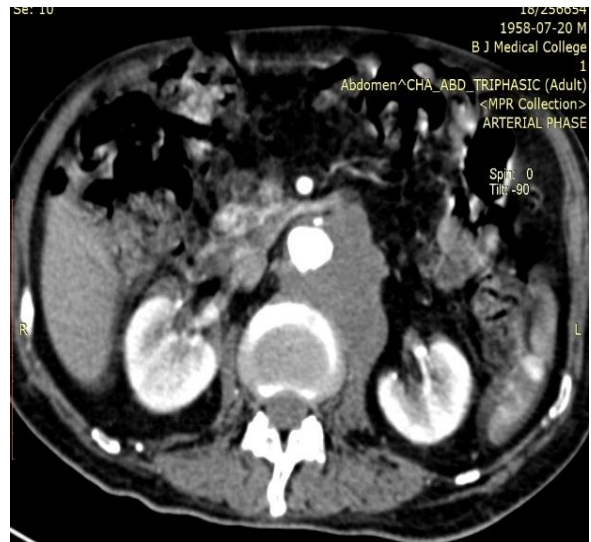


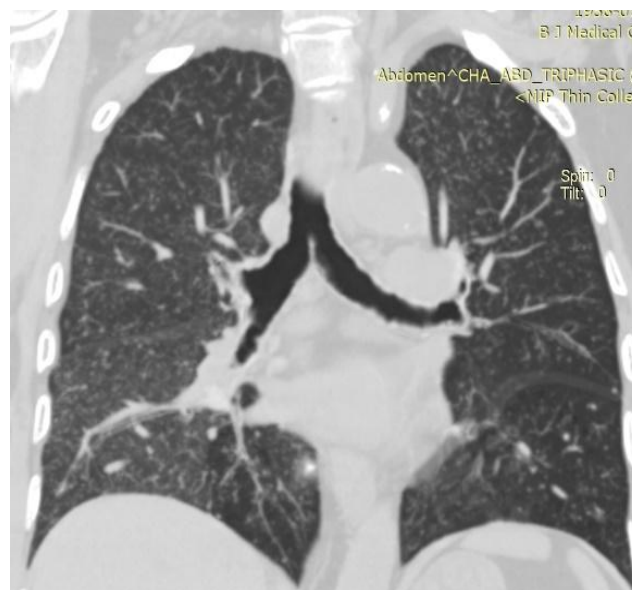
ADA levels were high - 53 (normal – 0-40) & Gene expert test for TB was positive for mycobacterium tuberculosis. MRI Brain with whole spine screening was done which revealed patchy hyperintense signals in cervical cord from C3 to C6 vertebrae levels. There was an altered signal intensity lesion in relation to infrarenal

aorta at the level of L1,L2 vertebrae which was causing erosion of anterior margin of L2 vertebrae body. Possibility of Infrarenal aortic aneurysm was given and CT aortogram was advised.



MRI was followed by USG Abdomen which confirmed the presence of Infrarenal abdominal aortic aneurysm. CT Aortogram of the patient was done, which again confirmed the presence of Approximately mm sized lobulated minimally peripherally enhancing Infrarenal abdominal aortic aneurysm with surrounding inflammatory mass. Erosion of anterior margin of L2 vertebrae body was seen with infiltration into left psoas muscle and inferior vena cava. Lung window of the patient showed multiple tiny military opacities in bilateral lung field.





On the basis of these investigations, Final Diagnosis of Tuberculous Pseudoaneurysm of Aorta with involvement of adjacent vertebral body, miliary opacities in bilateral lungs and tuberculous meningitis was made. Patient has been started on Antitubercular therapy.

II. Discussion

Pseudoaneurysm secondary to infection of *Mycobacterium tuberculosis* is a rare complication. It was first reported by Kamen in 1895.^[1]

The most common location of tuberculous aneurysms has been the thoracic aorta possibly due to anatomical proximity of the thoracic aorta to the lungs and mediastinum where the disease most commonly occurs.^[2]

Five types of tuberculous arterial disease have been described. Haythorn described tuberculous aneurysm, intimal polyp, panarteritis and military tuberculosis with intimal involvement.^[3] A fifth type, aortoarteritis, due to hypersensitivity to tuberculous antigens, causing aortic wall stenosis was reported from India.^[4]

Tuberculous pseudoaneurysm may form through the following mechanisms: *Mycobacterium tuberculosis* reaching the vessel wall through feeding vessels; spread of bacteria through lymphatic vessels around the artery; direct inoculation of the *M tuberculosis* after vasculature trauma; and direct invasion and spread from lymph nodes, abscess, and bone TB around the artery. Of these 4 mechanisms, the last is the most common mode of transmission, accounting for approximately 75% of cases.^[5]

Our patient also had associated erosion of adjacent vertebrae thus possibly pseudoaneurysm developed secondary to direct invasion by the adjacent vertebral tuberculosis.

Currently, surgery combined with simultaneous anti-TB drug treatment should be used for the disease.

Once the diagnosis of tuberculous pseudoaneurysm is confirmed, surgical treatment should be provided immediately combined with anti-TB drugs to save lives, prevent relapse, and facilitate the return to normal life, regardless of the size of the pseudoaneurysm.^[6]

Our patient had lung infiltration, cervical spinal cord involvement along with abdominal aortic pseudoaneurysm and vertebral involvement so he was started on Antitubercular therapy and was being considered for surgery.

III. Conclusion

- Tuberculous aortitis is seen mostly in patients with disseminated tuberculosis.
- Thoracic aorta is the most common site of tuberculous pseudoaneurysms.
- Diagnosis can be made with contrast enhanced CT, MRI or aortic angiography which shows a contrast filled mass around major artery.
- Tuberculous pseudoaneurysm has severe and fatal complications so once the diagnosis is confirmed, surgical treatment should be provided immediately combined with anti-TB drugs to save lives, prevent relapse, and facilitate the return to normal life, regardless of the size of the pseudoaneurysm.

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