

Tuberculous Pseudoaneurysm of Descending Abdominal Aorta in Association with Tuberculosis of Spine: A Rare Complication

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Abstract

Tuberculous pseudoaneurysm of aorta is an unusual entity, with fewer than 20 cases reported in the English-and Chinese-language literature, only 2 reports are related to *M. tuberculosis* infection of spine. We describe another case of tuberculous pseudoaneurysm of aorta in association with tuberculosis of spine.

Keywords: Tuberculous pseudoaneurysm; Aorta; *M. tuberculosis*; Spine

Case Report

A 20-year-old man with dull osphyalgia and intermittent hemoptysis for 8 months came to emergency department of our hospital due to sharp pain of back without the history of trauma [1-15]. At the time of admission, his vital signs were stable without fever (36.5 °C). The findings of the physical examination were negative. Laboratory studies revealed positive finding of PPD test. Sputum staining and culture for acid-fast bacilli were positive. The patient was treated with anti-tuberculosis drugs for 7 days and went home without treatment of pseudoaneurysm since the infection of *M. tuberculosis* is in active stage.

A 20-year-old man with Tuberculous pseudoaneurysm of aorta in association with tuberculosis of spine (Figures 1A-1D).

Discussion

A pseudoaneurysm is a hematoma that forms as the result of a leaking hole in an artery. The formation of a pseudoaneurysm begins with a defect in the arterial wall. Blood then leaks through the defect into the extravascular space where it is encapsulated by connective tissue and becomes organized. Pseudoaneurysm secondary to infection of *M. tuberculosis* is a rare complication. It was first reported by Weigert in 1882 [3] Till now, less than 100 cases were reported all around the world. Among all case reports collected by the writer of article, only 2 case reports [7,8] were found in relationship with tuberculosis of spine, others were caused by miliary tuberculosis of lung and other kinds of reasons. In our patient, the pseudoaneurysm arose from the erosion of a tuberculous vertebra into the abdominal

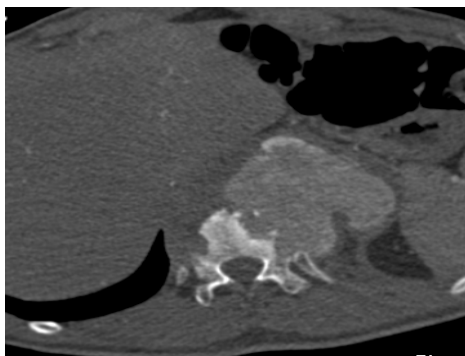


Figure 1A: Axial abdominal CTA shows a 8.6 × 4.5 cm out-pouching pseudoaneurysm of the proximal descending abdominal aorta.

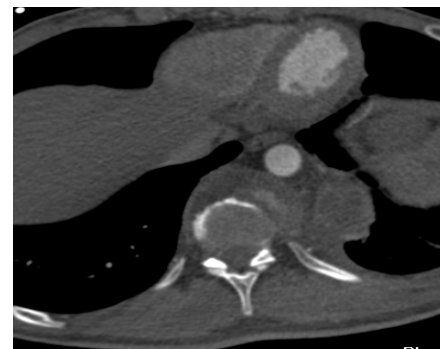


Figure 1B: Axial abdominal CTA shows bulge of left psoas major muscle into ipsilateral chest, leading to compression of left lung tissue.

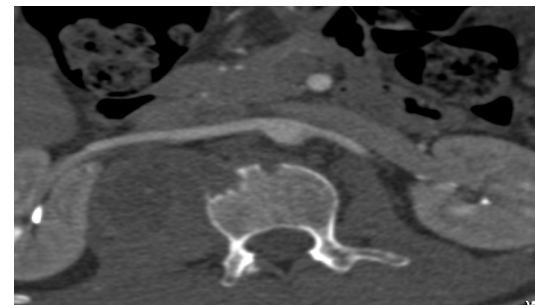


Figure 1C: Axial abdominal CTA shows irregular contrast enhancement of right psoas major muscle.

aorta. The pathogenesis observed in our patient arose from a nearby focus of inflammation eroding through the vessel wall. Recognition of tuberculous pseudoaneurysms remains difficult because they are

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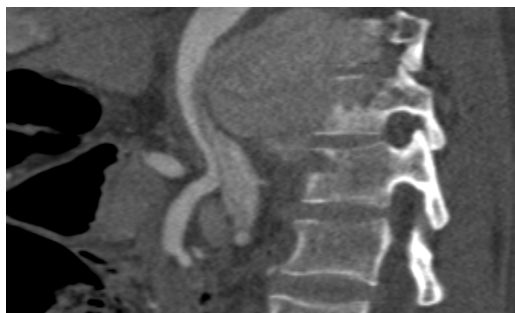


Figure 1D: Axial abdominal CTA shows bone destruction of L9-L12 vertebra.

so rare. They may present as a palpable mass in the superior of skin. Patients may also complain pain at the site of the aneurysm which may be accompanied by fever. Rupture or perforation of the aneurysm may lead to lethal lesion such as hemodynamic shock.

Conclusion

In summary, we report a case of a 20-year-old male with tuberculous vertebra with pseudoaneurysm formation of descending aorta. Pseudoaneurysm is a rare complication of infection of *M. tuberculosis*. It is recommended that contrast-enhanced CTA is the most proper choice. Treatment should include a full course of antituberculous chemotherapy and vascular surgery. If unrecognized, they may rupture with possibly lethal consequences.

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