

Infectious Aortitis Complicated By Type B Intramural Hematoma

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2. Key words

Infectious aortitis; Intramural hematoma

1. Abstract

An 83-year-old woman was admission due to intermittent fever for 1 week. Her temperature was 38.5°C, chest X-ray demonstrated tortuosity of aorta with calcification of aortic arch. Her blood cultures subsequently all grew Methicillin-Resistant *Staphylococcus aureus* (MRSA). Echocardiography revealed no vegetation. The symptoms of chest tightness and shortness of breath were noted. A follow-up chest X-ray showed progressive mediastinal widening. Contrast enhanced computed tomography (CT) scan demonstrated thickening of the wall of descending aorta that measured 0.7 cm, suggestive of aortitis with intramural hematoma.

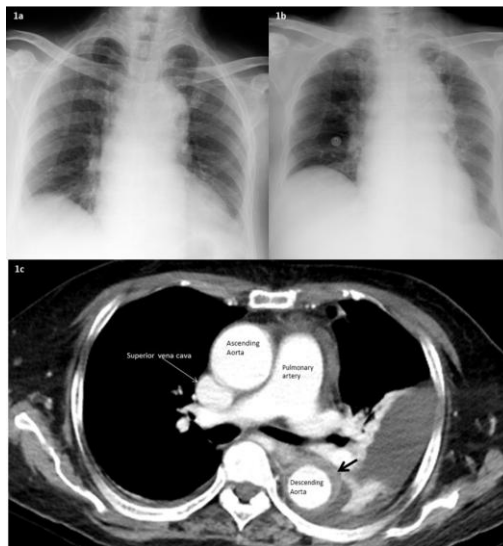


Figure 1: Chest X-ray (a) demonstrated tortuosity of aorta with calcification of aortic arch at admission and (b) showed progressive mediastinal widening during hospitalization. Contrast enhanced CT (c) revealed aortitis with intramural hematoma.

3. Case Presentation

An 83-year-old woman was admission due to intermittent fever for 1 week. She had history of type 2 diabetes mellitus, hypertensive cardiovascular disease, and old cerebrovascular accident. She had no history of trauma. On physical examination, her temperature was 38.5°C, and the cardiovascular hemodynamics was stable initially. The white cell count was 17,540/ μ L, C-reactive protein level was 15.39 mg/dl, and other blood tests were unremarkable. Chest X-ray demonstrated tortuosity of aorta with calcification of aortic

arch (Figure 1a). Her blood cultures subsequently all grew Methicillin-Resistant *Staphylococcus aureus* (MRSA). Intravenous antibiotic of vancomycin was administrated. Echocardiography revealed no vegetation. On the 7th day after admission, the symptoms of chest tightness with shortness of breath and high blood pressure were noted. The electrocardiograms demonstrated sinus tachycardia, a follow-up chest X-ray showed progressive mediastinal widening (Figure 1b). Contrast enhanced computed tomography (CT) scan demonstrated thickening of the wall of descending aorta that

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measured 0.7 cm, indicative of aortitis with intramural hematoma (Figure 1c, black arrow). The clinical diagnosis of infectious aortitis complicated by type B intramural hematoma was made finally.

4. Discussion

Infectious aortitis can be caused by several mechanisms: (1) direct bacteremic seeding of an intimal injury, (2) septic emboli of the aortic vasa vasorum, (3) continuous focus of infection extending to the aorta wall with intramural hematoma, and (4) trauma, such as a penetrating injury [1-3]. The diagnosis of infectious aortitis is usually suspected on imaging studies and on symptoms of infection (fever, associated with chest, abdominal or back pain), which may be delayed and is confirmed by the culturing organisms from the blood or surgical specimens. Surgical intervention should be considered when the patients with impending aortic rupture or uncontrolled sepsis. CT scan is a helpful diagnostic tool and may demonstrate rapid aneurysm development, peri-aortic soft-tissue mass and peri-aortic gas (in advanced cases) [2-4]. Early diagnosis and timely treatment can improve clinical outcomes.

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