

Infectious Aortitis Complicated by Type B Intramural Hematoma

Wang YH¹, Wang RL¹, Wu KL^{2,3}, Yang CC⁴ and Hsiao PJ^{2,3,*}

¹Department of Internal Medicine, Taoyuan Armed Forces General Hospital, Taiwan

²Division of Nephrology, Department of Internal Medicine, Taoyuan Armed Forces General Hospital, Taiwan

³Division of Nephrology, Department of Internal Medicine, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

⁴Division of Cardiovascular Disease, Department of Internal Medicine, Taoyuan Armed Forces General Hospital, Taiwan

Volume 4 Issue 5- 2020

Received Date: 14 June 2020

Accepted Date: 25 June 2020

Published Date: 29 June 2020

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, and 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.

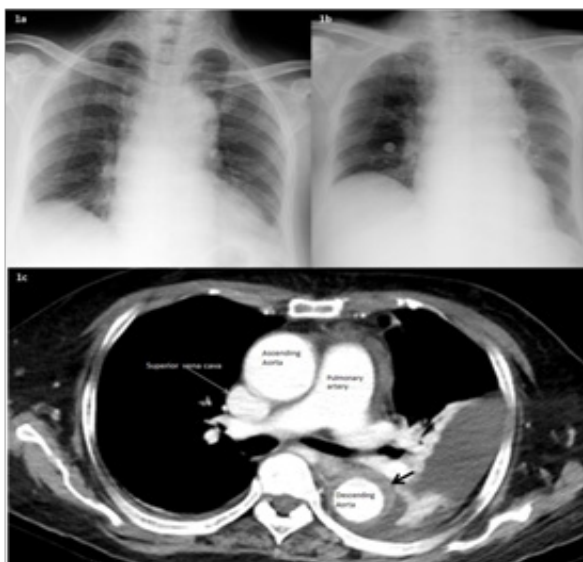


Figure 1: Chest X-ray (a) demonstrated tortuosity of aorta with calcification of aortic arch at admission and (b) showed progressive mediastinal widening during hospitalization. Contrast enhanced CT (c) revealed aortitis with intramural hematoma.

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 administered. 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

***Corresponding Author (s):** Po-Jen Hsiao, MD Division of Nephrology, Department of Internal Medicine, Taoyuan Armed Forces General Hospital, Taiwan. No.168, Zhongxing Rd., Longtan Dist., Taoyuan City 325, Taiwan, R.O.C. Tel: 886-3-4799595, Fax: 886-3-4801625, E-mail: a2005a660820@yahoo.com.tw

2. Chung-Chi Yang, MD, Division of Cardiology, Department of Internal Medicine, Taoyuan Armed Forces General Hospital, Taiwan. No.168, Zhongxing Rd., Longtan Dist., Taoyuan City 325, Taiwan, R.O.C. Tel: 886-3-4799595, Fax: 886-3-4801625, E-mail: ycc1@afygh.gov.tw

Citation: Hsiao PJ, Infectious Aortitis Complicated by Type B Intramural Hematoma. Annals of Clinical and Medical Case Reports. 2020; 4(5): 1-2.

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.

5. Acknowledgements

We thank the patient's consenting to publish the clinical information. This work is supported by grants from the Research Fund of the Taoyuan Armed Forces General Hospital (AFTYGH-109-009).

References

1. Lopes RJ, Almeida J, Dias PJ, Pinho P, Maciel MJ. Infectious thoracic aortitis: a literature review. *Clin Cardiol.* 2009; 32(9):488-90. doi:10.1002/clc.20578:488-90.
2. Alomari IB, Hamirani YS, Madera G, Tabe C, Akhtar N, Raizada V. Aortic intramural hematoma and its complications. *Circulation.* 2014; 129(6):711-6. doi: 10.1161/CIRCULATIONAHA.113.001809.
3. Macedo TA, Stanson AW, Oderich GS, Johnson CM, Panneton JM, Tie ML. Infected aortic aneurysms: imaging findings. *Radiology.* 2004; 231(1):250-7. doi:10.1148/radiol.2311021700
4. Haensig M. Type B intramural hematoma: focus on reasons for development and overlapping clinical disease. *Ann Cardiothorac Surg.* 2019; 8(4): 494-6. doi: 10.21037/acs.2019.06.04.