Emphysematous *Salmonella* aortitis with mycotic aneurysm

Sakolwat Montrivade,¹ Chanapong Kittayarak,² Gompol Suwanpimolkul,³
Pairaj Chattranukulchai¹

¹Division of Cardiovascular Medicine, Department of Medicine, Faculty of Medicine, Chulalongkorn University, King Chulalongkorn Memorial Hospital, Bangkok, Thailand

²Division of Cardiothoracic Unit, Department of Surgery, Faculty of Medicine, Chulalongkorn University, King Chulalongkorn Memorial Hospital, Bangkok, Thailand

³Division of Infectious disease, Department of Medicine, Faculty of Medicine, Chulalongkorn University, King Chulalongkorn Memorial Hospital, Bangkok, Thailand

Correspondence to

Dr Pairaj Chattranukulchai,
pairaj.md@gmail.com

Accepted 20 April 2017

DESCRIPTION

A 53-year-old man with history of poorly controlled diabetes mellitus presented with left chest pain radiated to the left shoulder for 3 weeks. On examination, he had low-grade fever, tachypnoea, regular pulse rate at 90/min and blood pressure

Figure 1 Chest radiograph reveals abnormal soft tissue density silhouette with proximal descending aorta with air-filled collection (arrow).

140/90 mm Hg. His cardiovascular and chest examinations were otherwise unremarkable.

Initial blood test showed leucocytosis and elevated C reactive protein level. Chest radiograph revealed abnormal soft tissue density silhouette with proximal descending aorta with air-filled collection (figure 1, arrow).

Contrast-enhanced CT of the aorta (CTA) revealed 1.3×1.5 cm outpouching lesion protruded from the anterior aspect of the proximal descending thoracic aorta (figure 2A, asterisks) with periaortic collection containing multiple air pockets (figure 2A, arrows) surrounding the aortic arch. *Salmonella* group D bacteraemia was confirmed with consecutive blood cultures. He was diagnosed with *Salmonella* aortitis complicated with mycotic aneurysm and periaortic abscess.

A high-dose intravenous ceftriaxone was started. He subsequently underwent endovascular aortic graft implantation with carotid–left subclavian bypass graft. After 6 weeks of intravenous antibiotic, the pain and fever subsided gradually and follow-up CTA showed substantial decrease in the size of periaortic abscess (figure 2B).

Non-typhoidal *Salmonella* serovars are a leading cause of Gram-negative bacterial aortitis and

Figure 2 (A) Transverse view of contrast-enhanced CT of the aorta reveals 1.3×1.5 cm outpouching lesion protruded from the anterior aspect of proximal descending aorta (asterisks) with periaortic collection containing multiple air pockets (arrows). (B) Follow-up images after endovascular aortic graft implantation with carotid–left subclavian bypass graft show substantial decrease in size of periaortic abscess.

CrossMark

To cite: Montrivade S, Kittayarak C, Suwanpimolkul G, et al. *BMJ Case Rep* Published Online First: [please include Day Month Year]. doi:10.1136/bcr-2017-220520

mycotic aneurysm.¹ Periaortic abscess with air collection are either signs of impending rupture or evidence of gas-forming pathogen.² However, the diagnosis is often delayed since clinical presentations are usually non-specific. There is no consensus over appropriate treatment of complicated *Salmonella* aortitis. Effective intravenous antibiotic therapy and prompt surgical interventions are the mainstay of treatment. Standard open surgical repairs are adequate resection and debridement of the

infected segment with vascular reconstruction. Endovascular stent graft is an alternative to conventional surgical treatment; however, late aneurysm-related complications seem to be more common which warrants the sequential follow-up imaging.³

Contributors SM and PC drafted the manuscript and prepared the image. GS and CK discussed and reviewed the manuscript.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

© BMJ Publishing Group Ltd (unless otherwise stated in the text of the article) 2017. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

Learning points

- ▶ Non-typhoidal *Salmonella* species are a leading cause of Gram-negative bacterial aortitis and mycotic aneurysm.
- ▶ Periaortic abscess with air collection are either signs of impending rupture or evidence of gas-forming pathogen.
- ▶ Timely intravenous antibiotics and prompt surgical interventions are mainstay of treatments to prevent catastrophic complication.

REFERENCES

- 1 Soravia-Dunand VA, Loo VG, Salit IE. Aortitis due to *Salmonella*: report of 10 cases and comprehensive review of the literature. *Clin Infect Dis* 1999;29:862–8.
- 2 Malouf JF, Chandrasekaran K, Orszulak TA. Mycotic aneurysms of the thoracic aorta: a diagnostic challenge. *Am J Med* 2003;115:489–96.
- 3 Lopes RJ, Almeida J, Dias PJ, et al. Infectious thoracic aortitis: a literature review. *Clin Cardiol* 2009;32:488–90.

Copyright 2017 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow