

# Mesaortitis luetic

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Accepted 29 August 2016

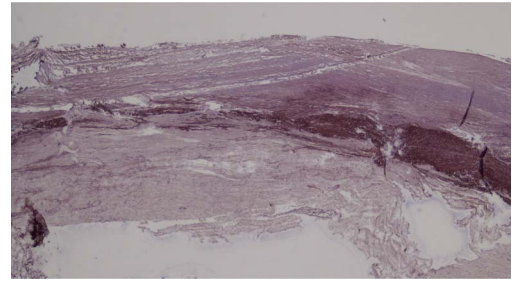
## DESCRIPTION

A middle-aged patient was admitted to the hospital for surgical repair of an aortic aneurysm (figure 1A). As part of routine preoperative testing, performed especially in patients with aortic aneurysms, the patient tested positive for late syphilis. The patient denied having had any previous therapy for syphilis. The patient was therefore suspected of suffering from cardiovascular syphilis presenting clinically with an aortic aneurysm. Neurosyphilis was excluded.

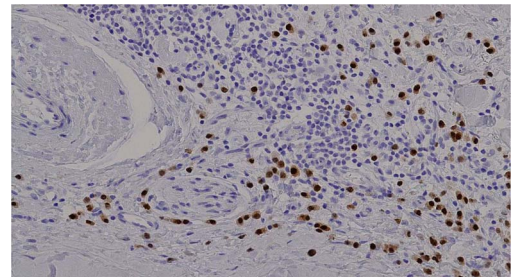
The patient then underwent surgery (figure 1B) and was treated with doxycycline 100 mg per orally two times a day for 30 days because of a known penicillin allergy.

The histopathological examinations of the aortic aneurysm showed a degeneration of the elastic fibres as well as mucoid degenerations (figure 2). The vasa vasorum were surrounded by dense lymphoplasmacellular infiltrates (figure 3). These results were consistent with mesaortitis luetic. The treponema immunostain did not detect any spirochaetes; however, this is not unusual in cardiovascular syphilis as it is a pathogen-poor stage of syphilis.<sup>1 2</sup> The patient was finally released in good condition from the hospital.

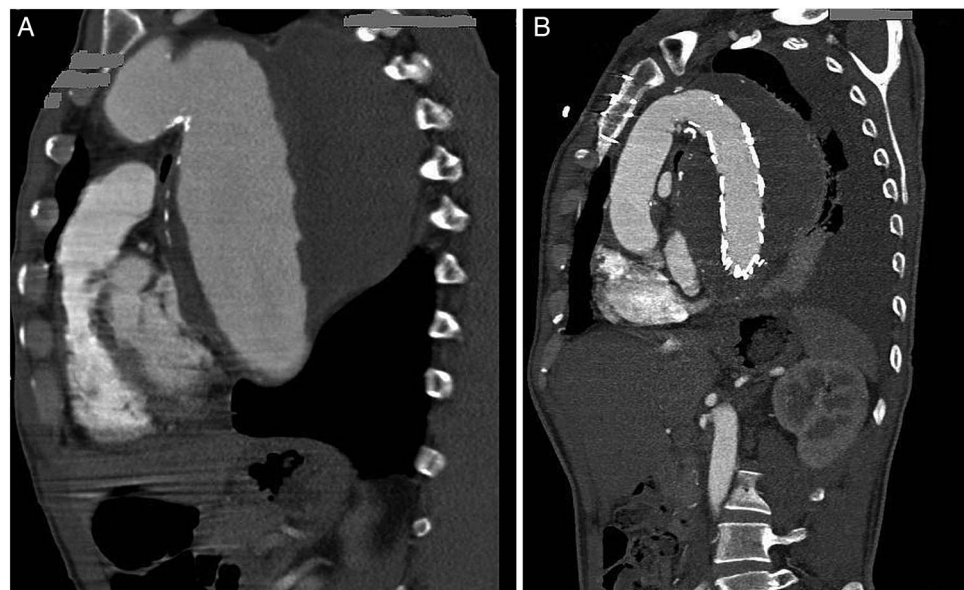
Mesaortitis luica is a form of cardiovascular syphilis that can present within the context of tertiary stage syphilis.<sup>1 2</sup> Since the antibiotic therapy was introduced the incidence of cardiovascular



**Figure 2** Histopathology slide of the aortic aneurysm: in the left part of the picture a clear reduction of the elastic fibres in the medial layer can be seen.



**Figure 3** Histopathology slide of the aortic aneurysm: around the vasa vasorum dense lymphoplasmacellular infiltrates can be seen. The plasma cells are recognisable by the marker multiple myeloma oncogene 1.



**Figure 1** (A) Preoperative CT scan: aortic aneurysm of the aortic arch and the ascending aorta (maximum diameter 12 cm). Courtesy of professor Rand, Department of Radiology, Hietzing hospital. (B) Postoperative CT scan: vascular prosthesis and stent in situ. The operation consisted of a vascular prosthesis of both the ascending aorta and the aortic arch. Furthermore the patient received a stent of the proximal descending aorta which was then extended into the thorax. Courtesy of professor Rand, Department of Radiology, Hietzing hospital.



**To cite:** Leiner S, Folkmann S, Kasimir M-T, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-216479

syphilis dropped to <0.1%.<sup>3</sup> The pathogenesis of cardiovascular syphilis is an obliterating endarteritis of the vasa vasorum.<sup>2</sup> The aortic media becomes ischaemic and smooth muscle cells as well as elastic features can get lost.<sup>2</sup> This process results in dilation of the aorta, aneurysm and insufficiency of the aortic valves.<sup>1 2</sup>

### Learning points

- ▶ If you see patients with late syphilis you should exclude tertiary stage syphilis. A chest X-ray is a good screening method for detecting an aortic aneurysm.
- ▶ Although a rare disease cardiovascular syphilis should be considered as a differential diagnosis in aortic aneurysm.

**Acknowledgements** Dr Breier served as scientific advisor. Dr Mertikian: provided preoperative and postoperative CT scans. Professor Rand provided preoperative and

postoperative CT scans. Dr Stella critically reviewed the study proposal and served as scientific advisor.

**Contributors** All authors included fulfilled the criteria of authorship. All authors have substantially contributed to the conception of the work and revised it critically for important intellectual content. SL substantially contributed to the design of the work, the acquisition and interpretation of data and drafting of the content. SF and M-TK revised the content. AS contributed to the interpretation of data.

**Competing interests** None declared.

**Patient consent** Not obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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