Fatal late prosthetic aortic valve endocarditis

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Prosthetic valve endocarditis (PVE) is a potentially devastating complication in patients who have undergone heart valve surgery. Despite the emergence of new potent antibiotics, recent improvements in diagnostic—therapeutic strategy and certain advances of surgery, PVE is still associated with high mortality between 20 and 30%. Annular extension of the infectious process is common and carries a substantial prognostic significance in determining the chances of a surgical treatment. An appropriately timed surgical intervention of the infected heart valve contributes to reduced mortality.

We report a 68-year-old man presented to the Accident and Emergency Unit, with shortness of breath, which had been treated as flu over the previous 3 weeks. The laboratory findings showed increased inflammatory markers. In the past medical history there is hypertension, hyperlipidemia, peripheral vascular disease and a tissue aortic valve replacement 3 years prior to recent admission. A transthoracic echo demonstrated an echodense appearance to the aortic root and a dissection flap could not be excluded.

While performing a chest X-ray his condition suddenly worsened with ongoing pulmonary oedema, loss of diastolic pressure at maintained systolic, which required intubation. Chest X-ray demonstrated patchy consolidation throughout both lungs and projection of a fine metallic frame structure in the aortic arch region. Computed tomography revealed no dissection but the aortic valve was found within the arch at the origin of the supraaortic vessels. The metal frame was surrounded by low-density material and the annulus appeared ragged with an absent valve. In the ensuing minutes the patient died from an uncontrollable circulatory shock.

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Panel A. Metallic framed foreign body visible in the aortic arch on the posteroanterior chest X-ray.
Panel B. Arrow marks the ‘empty’ aortic root on the chest computed tomography.
Panel C. Arrow shows the prosthetic tissue aortic valve impacted to the origin of the supraaortic vessels.