Giant pseudoaneurysm after aortic root replacement

A 22-year-old woman was born with a bicuspid aortic valve. Initially she underwent a valvulotomy, followed by a Ross procedure nine years later. Because of dilation of the autograft, a root replacement was performed with a Freestyle stentless bioprosthesis. The procedure was complicated by a sterile, probably biological glue-induced, mediastinitis.

Six months later she started to complain about chest pain. A CT scan revealed a large pseudoaneurysm (figure 1). The aneurysm originated from the distal connection of the prosthesis, for which an interposition tube graft was placed under hypothermic circulatory arrest. Recovery was uneventful.

Pseudoaneurysm of the ascending aorta is rare after cardiac surgery (<0.1%).¹ It is suggested that the use of biological glue and postsurgical mediastinitis lead to intramural inflammation and aortic degeneration and are therefore risk factors for pseudoaneurysm formation.²⁻⁴ In our patient the development of symptoms revealed the diagnosis of pseudoaneurysm. A CT scan a few months later should be considered in patients with a mediastinitis after root replacement. ■

References

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Figure 1. A) A CT scan demonstrated a large pseudoaneurysm, originating from the connection of the Freestyle prosthesis with the native aorta. B) The aneurysm had thrombus adjacent to the wall with a centre showing normal contrast density. The vena cava superior (VCS) and right atrium (RA) were compressed by the aneurysm.