

5. Franklin SS, Khan SA, Wong ND, Larson MG, Levy D. Is pulse pressure useful in predicting risk for coronary heart disease? The Framingham heart study. *Circulation* 1999;100:354–360.
6. Kelly R, Hayward C, Avolio A, O'Rourke M. Noninvasive determination of age-related changes in the human arterial pulse. *Circulation* 1989;80:1652–1659.
7. Finkelstein SM, Cohn JN. First- and third-order models for determining arterial compliance. *J Hypertens Suppl* 1992;10:S11–S14.
8. O'Rourke MF, Staessen JA, Vlachopoulos C, Duprez D, Plante GE. Clinical applications of arterial stiffness; definitions and reference values. *Am J Hypertens* 2002;15:426–444.
9. McVeigh GE, Allen PB, Morgan DR, Hanratty CG, Silke B. Nitric oxide modulation of blood vessel tone identified by arterial waveform analysis. *Clin Sci (Lond)* 2001;100:387–393.
10. Naka KK, Tweddel AC, Doshi SN, Goodfellow J, Henderson AH. Flow-mediated changes in pulse wave velocity: a new clinical measure of endothelial function. *Eur Heart J* 2006;27:302–309. First published on November 2, 2005, doi:10.1093/eurheartj/ehi619.
11. Wilson AM, O'Neal D, Nelson CL, Prior DL, Best JD, Jenkins AJ. Comparison of arterial assessments in low and high vascular disease risk groups. *Am J Hypertens* 2004;17:285–291.

## Clinical vignette

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### Emergency endovascular repair of ruptured pseudo-aneurysm at the site of a corrected aortic coarctation

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A 51-year-old patient, previously operated on at the age of 33 for a ruptured aneurysm of the descending aorta at the site of a non-diagnosed coarctation, was referred because of acute haemoptysis. Chest X-ray showed an enlarged left upper mediastinum (Panel A). Chest computer tomography showed the presence of a pseudo-aneurysm at the level of the patch (Panel B), with evidence of an upper left pulmonary lobe haemorrhage (Panel C), compatible with an aorto-bronchial fistula.

A successful urgent endovascular repair was performed with an aorto-aortic talent prosthesis (proximal and distal diameter 38/36 mm; Medtronic, MN, USA) excluding the pseudo-aneurysm, stabilizing the patient and improving his symptoms.

No further complication occurred and recovery was rapid without functional sequelae. The 3-year follow-up thoracic spiral CT scan shows correct positioned endoprotheses and exclusion of the endoleak (Panel D). This case illustrates that urgent endovascular repair of aortic aneurysm is feasible in selected cases avoiding major thoracic surgery.

Panel A. Chest X-ray shows an enlarged left upper mediastinum.

Panel B. Thorax CT-scan showing a pseudo-aneurysm in the descending part of the thoracic aorta at the side of the previously implanted patch with evidence of extraluminal contrast medium (arrow).

Panel C. Thorax CT scan showing an upper left pulmonary lobe high-density opacification (arrows) caused by blood, probably due to an aorto-bronchial fistula.

Panel D. Thorax CT scan at 3-year follow-up showing complete exclusion of the aneurysm.

