

Post-angioplasty aneurysm of right coronary artery

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Abstract

Coronary artery aneurysms are an uncommon disease whose incidence ranges from 0.3% to 5.3%. The right coronary artery is affected in 40-70% of cases. Percutaneous coronary angioplasty is among causative factors, in particular with stent implantation. We present a case of large post-angioplasty aneurysm of the right coronary artery requiring surgical correction.

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Post-PTCA coronary artery aneurysm

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Abstract

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Coronary artery aneurysms are an uncommon disease whose incidence ranges from 0.3% to 5.3%¹. The right coronary artery is affected in 40-70% of cases. Percutaneous coronary angioplasty is among causative factors, in particular with stent implantation; its incidence ranges from 1.25% to 3.9%.^{2,3}

A 70-year-old man with history of multiple coronary angioplasty procedures was admitted with diagnosis of aneurysm of the right coronary artery at the site of past DES insertion (Figure).

Under cardiopulmonary bypass, the large aneurysm was incised and oversewn with final grafting of the posterior descending artery with in situ right internal mammary artery.

IRB approval: N/A

Informed consent: N/A

References

1. Sherif SA, Tok OO, Taşköylü Ö, Goktekin O, Kilic ID. Coronary Artery Aneurysms: A Review of the Epidemiology, Pathophysiology, Diagnosis, and Treatment. *Frontiers Cardiovasc Medicine* 2017;4:24.
2. Slota PA, Fischman DL, Savage MP, Rake R, Goldberg S, Investigators ST. Frequency and Outcome of Development of Coronary Artery Aneurysm After Intracoronary Stent Placement and Angioplasty. *Am J Cardiol* 1997;79:1104–6.
3. Ahn C-M, Hong B-K, Kim J-Y, Min P-K, et al. Incidence and natural history of coronary artery aneurysm developing after drug-eluting stent implantation. *Am Heart J* 2010;160:987–94.

Figure: A: pre-PTCA ectatic RCA; B: post-PTCA true RCA aneurysm; C: surgical view: aneurysm; D: aneurysm's content; E: arrows showing RCA (bottom left) and PDA, aneurysm in between; F: RIMA in situ graft to PDA, repaired aneurysm. RA: right atrium; AO: aorta; PDA: posterior descending artery; RCA: right coronary artery

