



CASE REPORT

A perilous journey through the heart: Ventricular tachycardia caused by a foreign body



Nikolaos Surlas ^a, Lida Papavasileiou ^b,
Stamatis Makrygiannis ^a, Athanasios Pipilis ^{a,*}

^a 1st Cardiology Department, Diagnostic and Therapeutic Centre of Athens "HYGEIA", Greece

^b Pacing and Electrophysiology Department, Diagnostic and Therapeutic Centre of Athens "HYGEIA", Greece

Received 7 July 2015; accepted 11 May 2016

Available online 22 September 2016

KEYWORDS

Ventricular
tachycardia;
foreign body;
Port-A-Cath

A 42-year-old man presented to a hospital with palpitations, presyncope and episodes of ventricular tachycardia (Fig. A). The man was engaged in heavy activity, shoveling snow, hours before admission. He had no risk factors for coronary artery disease or a history of arrhythmic episodes, and his echocardiogram was normal. The man did have a history of breast cancer, treated with chemotherapy that was delivered via a right subclavian polyurethane venous Port-A-Cath six years ago. The patient was referred to us for further investigation.

Upon admission, arrhythmic symptoms had disappeared and ECG was normal. Additionally, there were no symptoms suggestive of coronary artery disease or pulmonary embolism and cardiac MRI and coronary angiography

were normal. However, a portion of the Port-A-Cath was observed in the right pulmonary artery on fluoroscopy during coronary arteriography (Fig. B, arrows). In retrospective review of the MRI, the fragmented portion of the catheter was not visible.

We obtained the chest X-ray from the initial hospital that was performed when the arrhythmia was occurring. This chest X-ray displayed the Port-A-Cath, broken near its entry in the subclavian vein. The distal portion of the Port-A-Cath was detached and appeared downstream near the tricuspid valve, obviously causing arrhythmias (Fig. C and D, arrows). A chest X-ray, 2 years ago, revealed that the Port-A-Cath was intact and did not demonstrate the "pinch off sign" (Fig. E arrows). The distal portion of the Port-A-Cath was captured with a snare (Fig. F) and removed via the femoral vein (Fig. G), a procedure lasting 60 min with 21 min of fluoroscopy. The proximal portion of the Port-A-Cath was removed transdermally (Fig. H).

Migration of venous catheters is not rare.^{1–3} In our case, the previously intact Port-A-Cath was fractured as a result of vigorous upper arm motion. The broken portion of the Port-A-Cath travelled downstream through the tricuspid

* Corresponding author. Tel.: +30 2106867000; fax: +30 2106845089.

E-mail address: a.pipilis@hygeia.gr (A. Pipilis).

Peer review under responsibility of Hellenic Cardiological Society.

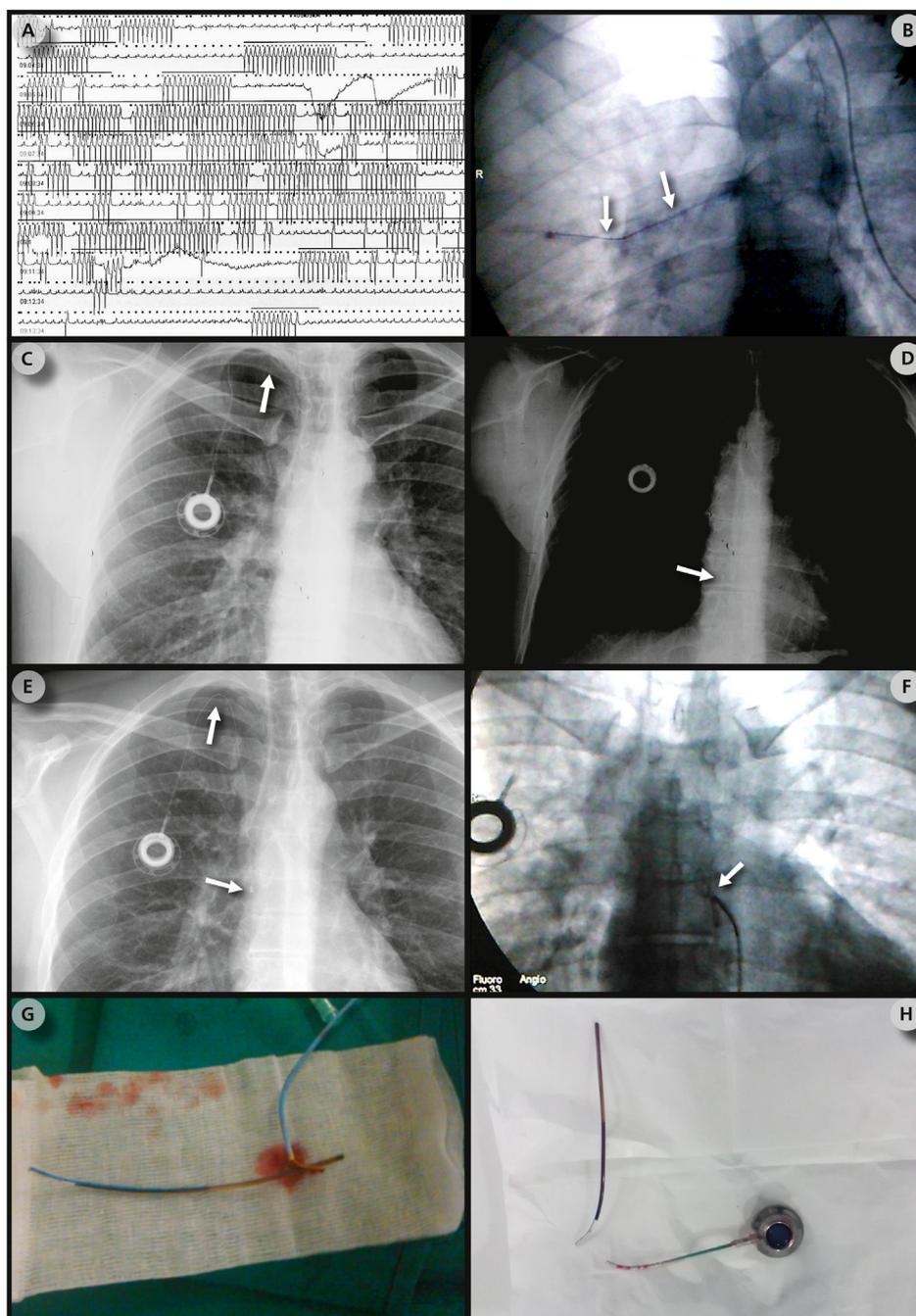


Figure 1 Panel A. Runs of ventricular tachycardia. Panel B. Fluoroscopy during coronary arteriography shows Port-A-Cath in the right pulmonary artery (arrows). Panel C. Chest X-ray with broken Port-A-Cath indicated by an arrow. Panel D. Chest X-Ray showing the distal part of Port-A-Cath near the tricuspid valve. Panel E. Old chest X-ray showing integrity of the Port-A-Cath with its distal end in SVC. Panel F. Port-A-Cath captured with a snare. Panel G. Distal part removed. Panel H. Both parts removed.

and pulmonary valves causing VT episodes; later, it continued its journey to the pulmonary artery, and the arrhythmia was resolved.

References

1. El Hammoui M, El Ouazni M, Arsalane A, El Oueriachi F, Mansouri H, Kabiri el H. Incidence and complications of permanent venous central access systems: a series of 1,460 cases. *Korean J Thorac Cardiovasc Surg.* 2014;47:117–123.
2. Doley RP, Brar P, Chaudhary S, Bedi R, Swami AC, Wig JD. Port catheter fracture and migration in internal jugular vein. *Am J Case Rep.* 2012;13:14–16.
3. Nazareno J, Elliott JA, Finnie KJ. Cardiac arrhythmia due to subclavian catheter fracture and embolization. *Can J Cardiol.* 2005;21:791–792.