

## Image in cardiology

## Right Atrium Angiosarcoma: An Unexpected Cause of Stroke

## Angiosarcoma de la aurícula derecha: una causa inesperada de ictus

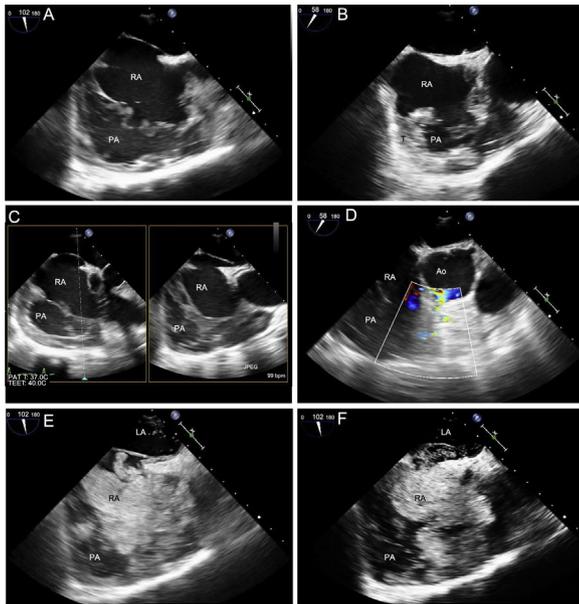
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Figure 1.

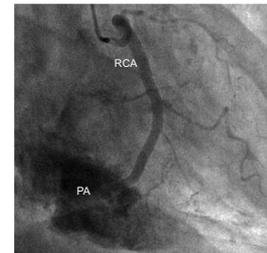


Figure 2.

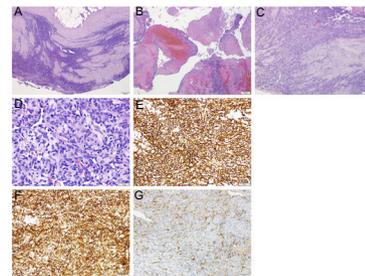


Figure 3.

A 53-year-old woman, who had undergone diagnostic pericardiocentesis 1 month previously, was admitted with an ischemic stroke. The transthoracic and transesophageal echocardiograms showed a cavity next to, and in continuity with, the right atrium (RA), compatible with a pseudoaneurysm (PA), filled by masses resembling thrombus (T) (Figure 1A-C, videos 1 and 2 of the supplementary data). A systolic flow was observed with color Doppler, connecting the PA with the aorta (Ao), next to the right coronary cusp (Figure 1D, video 3 of the supplementary data). On agitated saline injection, a patent foramen ovale, with right-left shunt, was obvious, as was PA filling (Figure 1E-F, video 4 of the supplementary data).

Coronary angiography was unremarkable for atherosclerosis, but a right coronary artery (RCA) fistula was found, draining into the PA, in accordance with echocardiographic findings (Figure 2).

On cardiac surgery, RA, coronary sulcus, and RCA rupture were found; the RA was repaired with a pericardial patch, the coronary sulcus was sutured and a bypass to the RCA performed. Despite acute success, the patient developed pericardial tamponade and right heart dysfunction, leading to death.

Clinical and intraoperative findings were interpreted as iatrogenic complications of the pericardiocentesis performed earlier. At the time of surgery, 3 labeled specimens were sent for pathological analysis, including pericardial, RA blood clot and RA specimens (Figure 3A-C). Histological (Figure 3D) and immunohistochemical studies were compatible with an angiosarcoma, showing expression of CD31, CD34, von Willebrand factor (Figure 3E-G, respectively).

Autopsy was not performed. The pathological analysis was essential in establishing the diagnosis of a primary cardiac angiosarcoma, with a locally destructive profile, causing the PA lesion and RA-RCA fistula, manifesting clinically as paradoxical embolization.

## APPENDIX. SUPPLEMENTARY DATA

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.rec.2018.07.006>.

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