

CLINICAL IMAGE

Cerebral calcium embolism

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Abstract

A new-onset neurological deficit after calcified aortic valve replacement and an hyperdense image on the computed tomography raised suspicion of an stroke of unusual etiology.

KEYWORDS

anticoagulation, calcium embolism, stroke

1 | CASE DESCRIPTION

A 59-year-old man with aortic valve calcification, which conditioned severe stenosis, was admitted to the recovery room after mechanical aortic valve replacement. Sedation withdrawal revealed a right-side hemiparesis and an

inability to obey verbal commands. Urgent computed tomography showed mild hypoattenuation and loss of gray-white differentiation in the left middle cerebral artery territory (Figure 1, left, arrowheads). A calcium density image (Figure 1, left, arrow), concordant with calcified valve migration, was found in M1 segment of the left

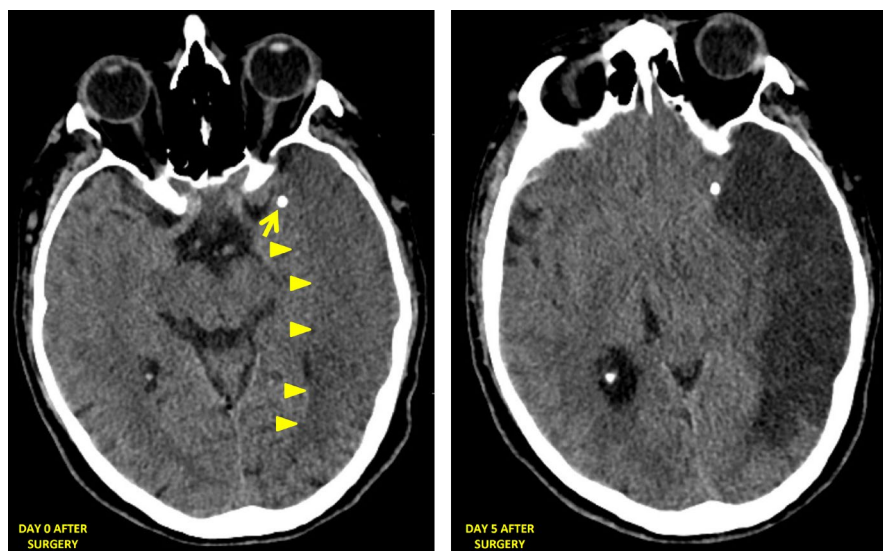


FIGURE 1 Computed tomography on the onset of symptoms (left) and 5 days later (right)

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middle cerebral artery. Given the potential hemorrhagic transformation of the ischemic area produced by a high severity stroke,¹ the risks of therapeutic anticoagulation were deemed greater than its advantages in terms of preventing thrombus formation on the mechanical valve. Therefore, only prophylactic-dose heparin was prescribed. In the course of the following days, the patient slipped into a coma and developed a malignant ischemic stroke (Figure 1, right). The limitation of therapeutic effort was prioritized.

Calcium embolism is a rare cause of stroke, but it is a well-described complication after transcatheter aortic valve implantation.² This concern has led to the development and implementation in the clinical practice of different embolic protection devices. Once the calcium embolus migrates into brain vasculature, anticoagulation management of these patients is controversial and requires a case-by-case assessment.

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AUTHOR CONTRIBUTIONS

Asensi Cantó P. wrote the case report. Solís Ruíz J. and Lloret Madrid P. suggested improvements. Bonanad Boix S. was the caregiver of the patient, and revised the manuscript and suggested final changes.

CONSENT

Patient's family, as legally authorized representative, gave informed consent for the publication of this case report.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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