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Image in cardiology

Mechanical thrombectomy with the NeVa stent to treat STEMI

Trombectomía mecánica con el *stent* NeVa en el IAMCEST

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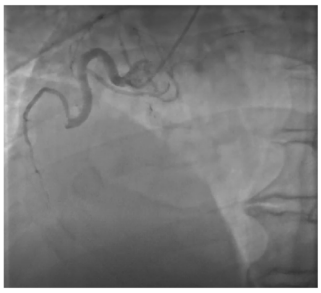

Figure 1.

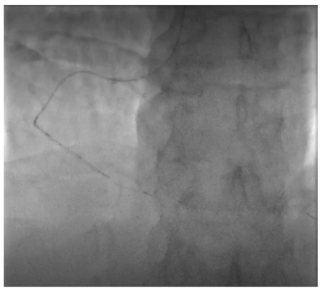

Figure 2.

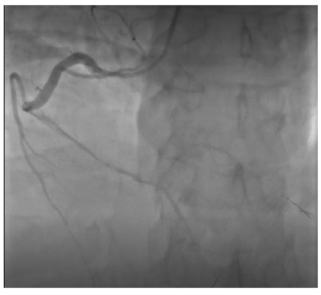

Figure 3.

Thrombectomy is not widely used in the treatment of ST-segment elevation myocardial infarction (STEMI), as randomized controlled trials have demonstrated a lack of clinical benefit and a higher risk of stroke than with balloon dilation. Treatment of STEMI with abundant thrombotic material, however, remains a challenge. We describe the use of a new thrombectomy system to treat STEMI for the first time in Spain.

The patient was a 53-year-old man with a history of type 2 diabetes mellitus, obesity, and smoking who was admitted to our hospital with inferior STEMI.

A coronary angiogram showed extensive thrombotic occlusion of the mid segment of the right coronary artery (figure 1, video 1 of the supplementary data). After several attempts to resolve the thrombus with balloon dilation and even conventional thrombectomy, it was decided to try the NeVa stent retriever (Vesalio, USA).

Two BMW guidewires were placed in the posterior descending and posterolateral arteries. A microcatheter was then inserted as far as the crux of the posterior descending artery using the prepositioned guidewire.

The NeVa stent retriever was advanced through the microcatheter, which was then removed (figure 2, video 2 of the supplementary data). Using a guide catheter extension system and continuous aspiration via 3 overlock syringes, the NeVa device was retrieved en bloc, resulting in the extraction of macroscopic thrombotic material and visualization of the reopened artery (figure 3, Video 3 of the supplementary data). The procedure was completed with the placement of 2 drug-eluting stents (3.0 × 38 mm and 4.0 ×38 mm) and confirmation of grade 3 flow on the Thrombolysis in Myocardial Infarction scale (video 4 of the supplementary data).

FUNDING

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ETHICAL CONSIDERATIONS

The patient provided his informed consent for the publication of this report. Sex and gender were reported in accordance with the Spanish Sex and Gender Equity in Research (SAGER) guidelines.

USE OF ARTIFICIAL INTELLIGENCE

Artificial intelligence was not used to produce this article.

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AUTHORS' CONTRIBUTIONS

R. D. Costabile: writing and visualization. S. Brugaletta: conceptualization, supervision, validation, and writing.

CONFLICTS OF INTEREST

There are no conflicts of interest.

APPENDIX. SUPPLEMENTARY DATA

Se puede consultar material adicional a este artículo en su versión electrónica disponible en https://doi.org/10.1016/j.recesp.2023.10.019.