FEops HEARTguide™ Case Report: LAAo

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A 85-year-old patient with permanent atrial fibrillation with a DDD pacemaker was sent for LAAO due to recurrent gastrointestinal bleedings even on apixaban and with CHA$_2$DS$_2$VASc and HAS-BLED scores of 4 and 3 respectively.

Challenge

CT showed a reversed chicken wing LAA, with a very low and posterior appendage (the ostium that comes out of the LIPV, type III) and a very short landing zone in a constant curve from the beginning towards anterior and superior, which hardly leaves an area for the device anchorage.
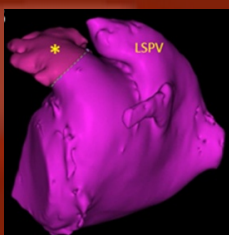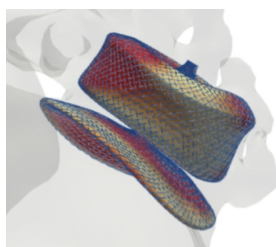

Solution

FEops HEARTguide™'s patient-specific computer simulations allowed to evaluate pre-operatively different Amulet (Abbott) device sizes and positions for this difficult reverse chicken wing LAA anatomy.
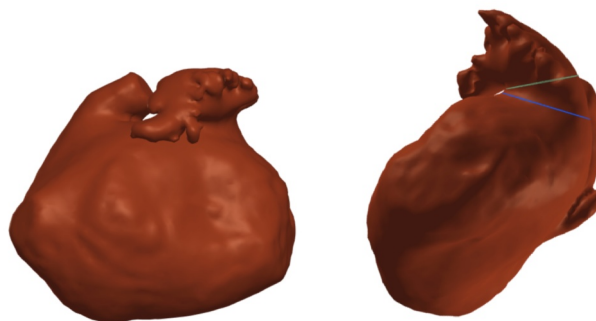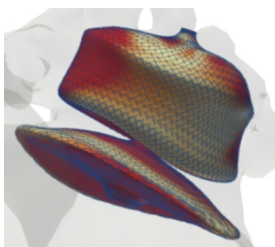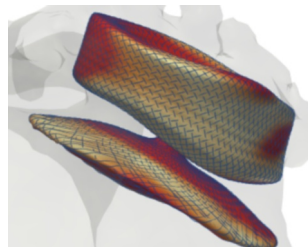

FEops HEARTguide™ simulations
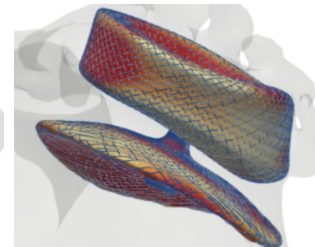
	28 mm Amulet Distal position	**31 mm Amulet** Distal position	**34 mm Amulet** Proximal position	Distal position
Simulated Mid-Lobe Mean Diameter	25.6 mm	27.6 mm	32.1 mm	31.8 mm
Physician evaluation	Risk of embolization	Apposition not good enough	Good option	No sandwich technique due to narrow wing

Scale: 0 mm – 2 mm

Result

After a first failed attempt to close this anatomy without using preoperative simulations, a 34 mm Amulet was successfully implanted proximally with the support of FEops HEARTguide™ simulations.
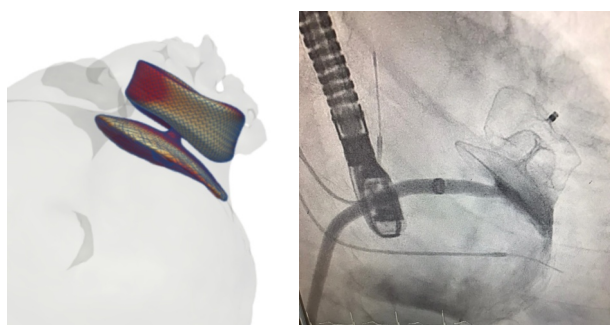
"In complex cases when there is no certainty of an optimal result, I would recommend to use FEops HEARTguide™ computer simulations before the implantation. Simulations allow to evaluate pre-operatively the working projection, the device size and its degree of compression depending on the depth of the landing zone and the selected size"

- Dr. López Mínguez