

# NEW ANTICOAGULANT FREE STRATEGY FOR NON VALVULAR ATRIAL FIBRILLATION IN HEMODIALYSIS PATIENTS

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## INTRODUCTION AND AIMS

Vascular calcification in patients with CKD-5 is associated with increased cardiovascular morbidity and mortality<sup>1</sup>. An excessive calcification of coronary arteries and the aortic heart valve has been reported during Warfarin treatment<sup>2</sup>. In addition use of oral anticoagulation (OAC) seems to be an important risk factor for calciphylaxis (calcific uremic arteriopathy), which occurs most commonly in patients with late stage CKD<sup>3</sup>. Calciphylaxis is a rare and usually fatal vasculopathic disorder characterized by very painful plaques or subcutaneous nodules and violaceous, mottled skin lesions that may progress to nonhealing ulcers, tissues necrosis and gangrene<sup>4</sup>. Atrial fibrillation (AF) is the most frequent reason for OAC use in CKD patients<sup>5</sup>.

## METHODS

An alternative to OAC use could be the percutaneous Left Atrial Appendage (LAA) closure<sup>6</sup>, that can reduce embolic risk in patients with AF. With this new technique an implantable component is permanently fixed in the LAA to prevent thrombus embolization from the left atrial appendage and reduce the risk of life-threatening bleeding events. Different studies demonstrated that in general population this procedure is not inferior to systemic anticoagulation with OAC in prevention of thromboembolic risk<sup>6-7</sup>. We reported our clinical experience with the use of this technique in haemodialysis patients with non valvular AF.

## GRAPHS AND TABLES

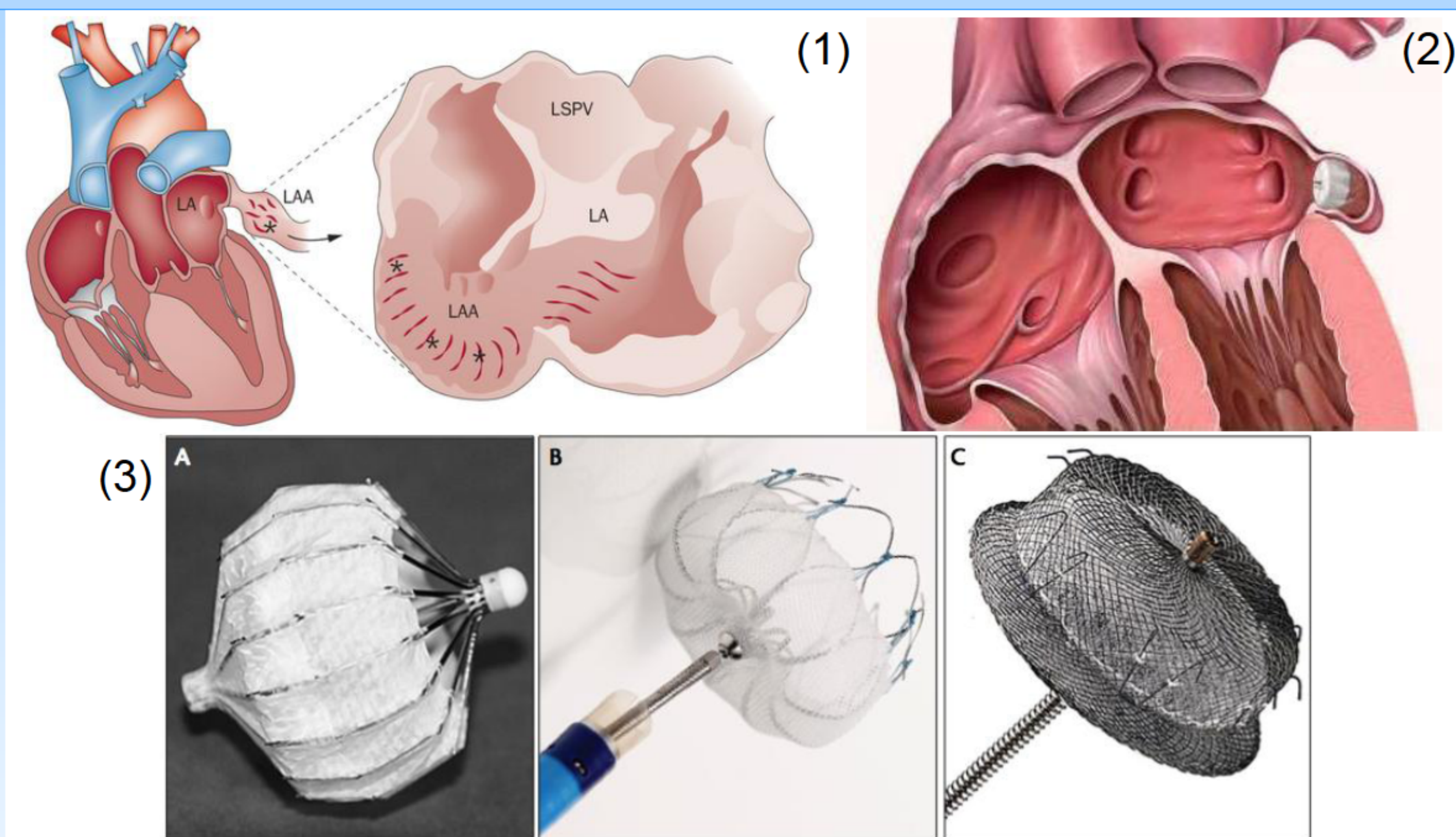


Figure 1. Panel (1) Left atrial appendage (LAA) anatomy; panel (2) percutaneous LAA transcatheter occlusion; panel (3) Different endoluminal LAA occlusion devices<sup>8</sup>

Table: Patients Clinical Characteristics

Age (years) (mean ± SD)	67.5 ± 13.03
Sex (%)	1 (25%) F / 3 (75%) M
Years of Dialysis (median, IQR)	6, IQR [2-9]
Cause of ESRD	3 Nephroangiosclerosis (75%) 1 Unknown (25%)
Comorbidity (% positive)	Diabetes (75%) Hypertension (100%) Coronary Artery Disease (25%)
Years of OAC therapy (median, IQR)	4, IQR [1-12.5]

## RESULTS

In the last few months four (4) haemodialysis patients were treated with percutaneous LAA closure. Clinical characteristics are summarized in Table 1. Bleeding and stroke risks were evaluated by HAS-BLED score and CHA2DS2-VASc score. Mean HAS-BLED score was 4.5±0.58 (equal to yearly estimates risk of major bleeding of 9%±0.11) and CHA2DA2-VASc score 4 ± 0.81 (equal to yearly risk of stroke without warfarin treatment of 4.47%±1.5). This procedure was well tolerated without any adverse events by each patient. OAC treatment was immediately interrupted after the procedure and doubled antiplatelet therapy was introduced. At this moment median of 6 months of follow-up was archived [IQR 6-9]; no adverse events has been assessed. Patients will be followed-up prospectively for up 2 years with clinical examination, ECG and echocardiography evaluation every 6 months. Three (3) new patients are currently under evaluation in order to be eligible for this procedure.

## CONCLUSIONS

To the best of our knowledge this is the first consecutive series of LAA closures in haemodialysis patients (currently in literature is reported only one case). This procedure represents a real clinical alternative to the use of coumaril derived drugs. Our experience leads the way to the possible routinary use of this procedure in CKD-5D patients. As well as this procedure could be used in the general population (in those patients with contraindications to OAC), even more this treatment should be offered as an alternative to traditional therapy in haemodialysis population, in which the use of OAC should be avoided for both increased risk of life-threatening bleeding events and well known negative cardiovascular effects.

## REFERENCES

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