

DURING LEFT ATRIAL APPENDAGE CLOSURE WITH WATCHMAN FLX

Vincenzo Mirco La Fazia MD¹, Carola Gianni MD¹, Nicola Pierucci MD¹, Sanghamitra Mohanty MD¹, Prem G. Torpalati MD¹, Domenico G. Della Rocca MD¹⁻³, Luigi Di Biase MD¹⁻², Andrea Natale MD¹.

1: Texas Cardiac Arrhythmia Institute, St. David's Medical Center, Austin, TX, USA; 2: Albert Einstein College of Medicine at Montefiore Hospital, New York, NY, USA; 3: Heart Rhythm Management Centre, Universitair Ziekenhuis Brussel-Vrije Universiteit Brussel, Belgium.

BACKGROUND

- Left atrial appendage (LAA) closure is an option for patient with atrial fibrillation that cannot take oral anticoagulant due to high bleeding risk.
- Before release of device PASS (position, anchor, size and seal) criteria must be verified.
- Optimal compression rate for watchman FLX device is between 10-30% according to company recommendations.

OBJECTIVE

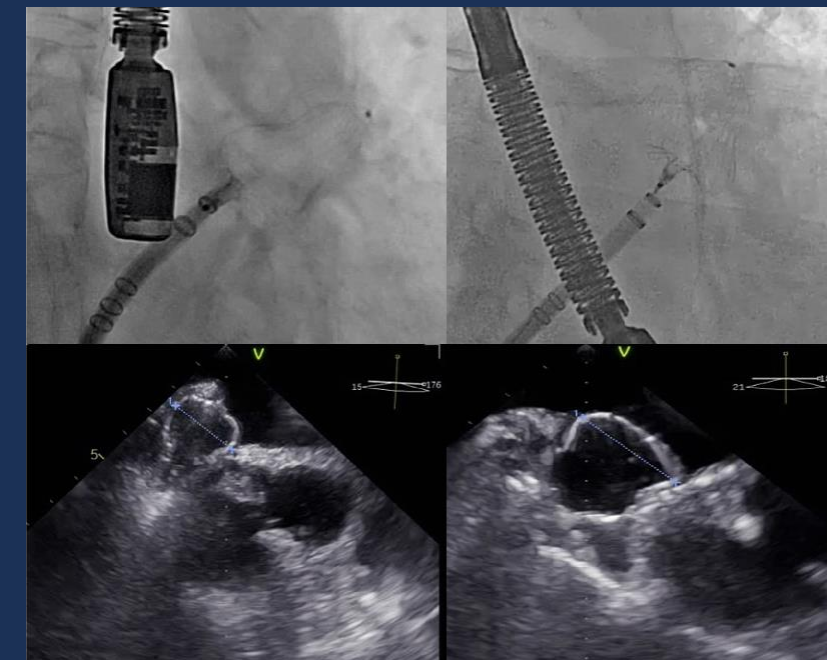
- The study evaluates the correlation between compression rate and leak presence after left atrial appendage closure.

METHODS

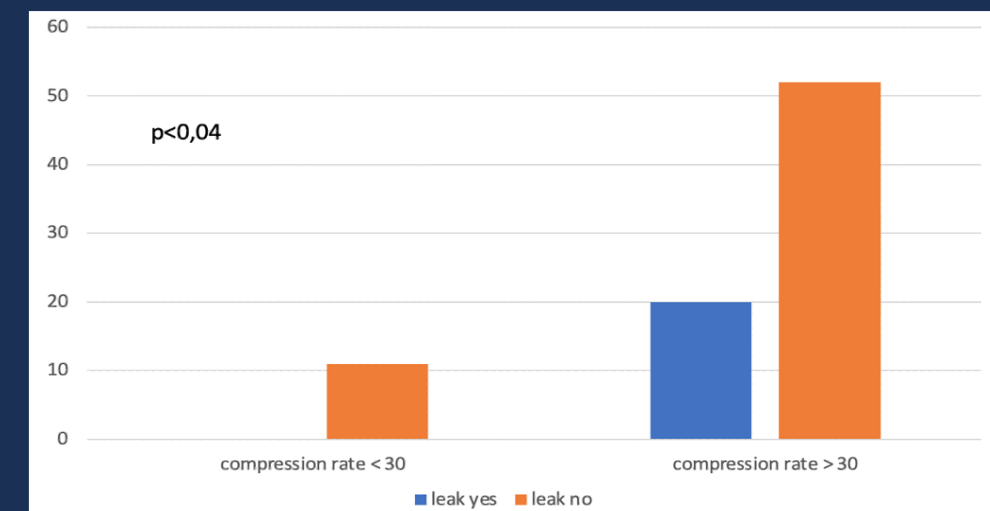
- This is a study including patients that underwent LAA closure under transesophageal echocardiography (TEE) with at least one follow-up where complete LAA closure was assessed by TEE in our center.
- Compression rate was calculated based on intraprocedural TEE images [figure 1] using the following formula: $(\text{original device size} - \text{size after deployment}) / \text{original device size} * 100$.
- Patients were divided into 2 groups based on the compression rate: group 1: 10-30%; group 2: >30%. The rate of leak between groups was compared using the Chi-square test.

RESULTS

- 83 patients (mean age: 77 ± 7 years) were included in the study.
- The implanted device size was 20 mm in 2 (2.4%), 24 mm in 11 (13.2%), 27 mm in 21 (25.3%), 31 mm in 32 (38.5%), and 35 mm in 17 (20.4) patients.
- Based on the compression rate, patients were classified into group 1: >30% [n=11 (13.2%)] and group 2: $\leq 30\%$ [n=72 (86.7%)]. Mean compression rate was 37.1% and 20.78% in group 1 and 2 respectively.
- At follow-up TEE, 20 (24%) patients were found to have a residual leak of <5 mm.
- When comparing leaks between the two groups, there was no leak in patients with >30% compression rate whereas in the group with $\leq 30\%$ there were 20 leaks (0/11 vs 20/72, p value 0.04, RR 0, 95% CI, 0-1).



Right: fluoroscopy and TEE views device compressed over company recommendation (35%)
Left: fluoroscopy and TEE views of device compressed according company recommendation (17%)



CONCLUSION

Devices with compression rate $\leq 30\%$ were associated with significantly higher risk of residual leak.