anticoagulation), and 18 peri-device leaks (all <5mm). Mean follow-up was 172.8 ± 117.3 days, with no stroke or death, but there was 1 TIA and 3 major bleeding.

CONCLUSIONS In our early Canadian experience, WATCHMAN for LAA closure in patients contraindicated to anticoagulation is safe and effective.

TCT-729
Percutaneous left atrial appendage closure in patients with non-valvular atrial fibrillation with Watchman® left atrial appendage device: single center experience and results up to three years follow-up
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BACKGROUND Percutaneous left atrial appendage closure (LAAC) has been although recognized as a new interventional routine, but the clinical experience with large number of patients from single hospital without cardiac surgery backup was worldwide very little. We evaluate patient selection, safety, feasibility, and midterm results of LAAC with Watchman® left atrial appendage (LAA) device in a single usual hospital without onsite cardiac surgery backup.

METHODS A retrospective review of LAAC cases with Watchman® LAA device in our hospital between February 2012 and April 2015. Demographic, echocardiographic, procedural, and follow-up data were collected and analyzed.

RESULTS LAAC was performed using Watchman® device in 181 non-valvular atrial fibrillation (NVAF) patients with long-term oral anticoagulants (OAC) contraindication. Mean age at closure was 74.75±7.78 (range from 47-92 years), 72.9% male. Hypertension, coronary artery disease, and diabetes were present in 71.9%, 61.5%, and 27.1% of patients respectively. Mean CHA2DS2-VASc score was 3.1. Success rate of device implantation was 96.1% (95% in first 90 cases, 99% in the second 91 cases) and associated with no major procedural complications except one case of major procedural and local anesthesia was advanced into the LA through separated ICE-guided transseptal puncture. Baseline characteristics, procedural and follow-up data were obtained from the published literature. Canadian procedural and long-term costs were obtained from the Ontario Case Costing Initiative and the Ontario Ministry of Health and Long Term Care.

CONCLUSIONS LAAC is a safe and effective stroke prevention therapy in NVAF patients in a single usual hospital without onsite cardiac surgery backup both at implantation and during short and midterm follow-up periods and remarkable improvement of success rate can be achieved with the increase of the experience of operators. A low number of TE events was recorded during follow-up.

CATEGORIES STRUCTURAL: Left Atrial Appendage Exclusion
KEYWORDS Left atrial appendage closure, Left atrial appendage, occlude device, Stroke
thrombus was found in 3 patients (2 Watchman Institute Inc.). Debris was found in all patients (9/10 clinical trials. A similar problem was encountered in the procedural stroke has been a major contributor to adverse events in formed LAA occlusions can be expected worldwide. However, peri-

As expected the procedure of LAA occlusion leads to the procedure, in all patients. This finding strongly encourages further investigations of the underlying mechanisms for embolization of different types of material, as well as the clinical impact of micro- emboli. A potential difference between different devices in thrombogenic potential as seen in our small series should also be addressed in future investigations and might help to improve device design and implantation techniques.

CATEGORIES STRUCTURAL: Left Atrial Appendage Exclusion
KEYWORDS Left atrial appendage closure, Protection devices

HEART FAILURE

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Abstract nos: 732 - 737

TCT-732
Hybrid Transcatheter-Thoracoscopic Ventricular Restoration: A Mini Invasive Therapeutics for Left Ventricular Anteroseptal Aneurysm
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BACKGROUND We have previously reported a less invasive off-pump epicardial ventricular enhancement (LIVE) procedure, which involves an open chest exposure with placement of an anchoring system in an experimental heart failure animal model. This study aimed to evaluate whether a novel hybrid transcatheter ventricular restoration (TCVR) approach, with thoracoscopic assistance, can achieve similar results in an ovine model of ischemic heart failure and LV anteroseptal aneurysm

METHODS Left ventricular (LV) anteroseptal scar was created by percutaneous coil-occlusion of the mid-left anterior descending coronary artery. Two months later, the scar was completely excluded via placement of serial pairs of anchors in the right ventricle septum and LV anterior epicardium through either open chest surgical approach (n=8) or minimal invasive hybrid TCVR approach (n=5). LV performance was evaluated before (baseline) and six weeks after device implantation by echocardiography.

RESULTS All animals survived with no device or procedure-related complications. TCVR significantly reduced LV end-systolic and end-diastolic volumes and increased the ejection fraction while stroke volume was preserved at 6 weeks follow-up; the apical rotation was significantly improved (4.3±1.3° vs. baseline 0.5±2.7°; p=0.03) and LV twist was restored (8.56±3.45 vs. baseline 3.71±5.39; p=0.04). No difference was shown between the two groups in volume reduction, ejection fraction or LV twist improvement (Table).

<table>
<thead>
<tr>
<th>Change at 6 weeks FU</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>from pre-device</td>
<td></td>
</tr>
<tr>
<td>LV end-diastolic volume (ml)</td>
<td>-29±11 (32%)</td>
</tr>
<tr>
<td>LV end-systolic volume (ml)</td>
<td>-28±8 (46%)</td>
</tr>
<tr>
<td>Stroke volume (ml)</td>
<td>7.8</td>
</tr>
<tr>
<td>Ejection fraction (%)</td>
<td>41±5</td>
</tr>
<tr>
<td>LV apical rotation ($)</td>
<td>3.87±2.67</td>
</tr>
<tr>
<td>LV twist (°)</td>
<td>4.86±3.74</td>
</tr>
</tbody>
</table>

CONCLUSIONS Compared with a more invasive open-chest surgical procedure, hybrid, thoracoscopically assisted TCVR can achieve similar volume reduction and improvement in contractility of the LV in an ovine model of ischemic cardiomyopathy with LV anteroseptal infarction. It might be a safe, effective and less invasive alternative to current open surgical therapies.

CATEGORIES STRUCTURAL: Heart Failure
KEYWORDS Apical Aneurysm, Heart failure, Transcatheter