Excimer Laser Atherectomy in the Management of Undilatable Coronary Stents

M. Salib1,2, R. Giles1,2, M. Pitney1,2
1 Eastern Heart Clinic, Randwick, Australia
2 Sutherland Heart Clinic, Caringbah, Australia

Introduction: Excimer laser has been reported to be safe and effective in the management of undilatable stents. We report our initial experience.

Methods: From March 2016 to January 2019, 10 patients (ages 62-84, 9 male) were treated for constrained stents despite high-pressure balloon inflation (≥26 atmospheres). Indications were threatened stent-thermosis in 1 and recurrent restenosis in 3 with refractory symptoms in 9. All patients had clear angiographic evidence of a poorly expanded stent showing >30% stent constraint, and 7 patients had multiple layers of stent. The procedure was performed under GA via 7F guiding catheter with a 0.9mm 80mJ/mm²/80Hz catheter (Spectranetics). Tissue debulking with a bloodless field was first performed followed by multiple contrast runs (average 6, 4-12). Lesions were post-dilated ≥20 atmospheres and then treated with DEB. Target vessels included RCA (3), LAD (2), LCx (1), Intermediate (1), and SVG-to-1MCx (1).

Results: Complete angiographic success (full stent-expansion, zero residual stenosis) occurred in 6 patients and partial-success (stent-constraint <15%, <30% residual stenosis) in 4. Multiple layers of stent were associated with partial-success. Micro-bubbles, slow-flow and pronounced ST-elevation occurred transiently in all patients. None required re-stenting. There were no procedural complications, all vessels had TIMI-3-flow and isoelectric ECGs on completion. Average next-day high-sensitivity-troponin-T level was 420ng/L. At 30-days and 1-year follow-up, there have been no deaths, and only one patient required TVR downstream in an untreated area 3 months later.

Conclusion: Excimer laser represents a therapeutic option for the management of a small group of highly selected and symptomatic patients.

Fever in the Setting of TAVI—Post-Implantation Fever vs Infection

D. Jin1,2, A. Baradi1,2, P. Trevella2, R. Whitbourne1,2, J. Darby1, S. Palmer1,2
1 St Vincent’s Hospital Melbourne, Melbourne, Australia
2 University of Melbourne, Melbourne, Australia

Introduction: Fever in the setting of endovascular intervention has been well described. There are limited studies in patients post transcatheter aortic valve implantation (TAVI). We aim to look at both the frequency and cause of fever in a TAVI population.

Methods: A retrospective cohort study was conducted at our institution. All patients who had a TAVI between 2009-2018 were analysed. We identified those who had a fever (≥38.0°C). White cell count (WCC), c-reactive protein (CRP) and septic screen results (blood/urine cultures, chest x-ray) were also reviewed.

Results: A total of 135 patients were included, with 19 (14.2%) presenting with fever. The mean age of these was 81.1 years ± 14.47, seven (36.8%) were male, five (26.3%) were diabetic. A cause of fever was only found in 5 of 19 (26.3%) patients, with three cases of pneumonia, two of urinary tract infection and one cellulitis. There was no significant difference between the average temperature (38.2°C ± 0.76°C, WCC (10.5 vs 9.0, p = 0.30) or CRP (97.0 vs 60.3, p = 0.21) between those with a source and those without. However the aver-