METHODS The cardiac intervention center at the Royal Bournemouth Hospital, UK has been one of the leading recruiting centers in the world for the BioFreedom stent LEADERS Free trial. After the recruitment period was complete, open label BioFreedom stent was incorporated in selected PCI cases who had high risk of bleeding and would benefit from short term DAPT therapy. The indication for PCI, procedural details, imaging, drug used, complications and follow up details were recorded and analyzed.

RESULTS From August 2014 - May 2015, 1690 stent cases were identified of which BioFreedom stent was used in 60 cases (3.6%). Mean age of these 60 was 76.6±10.5 years, 41 (68%) were males. The indications for PCI was STEMI 4 (6.7%), Non-STEMI 18 (30%), unstable angina 5 (8.3%), stable angina 35 (58.3%). The tip was deployed in 12 (20%) patients. Left ventricular systolic function was normal in 56.6%, mildly impaired 6.6%, moderately impaired 21.6% and severely impaired in 6.6%. A BioFreedom stent was selected during PCI in view of concomitant warfarin therapy in 27 (56.5%), elderly age 9 (15%), awaiting noncardiac surgery 8 (13.3%), anemia 3 (5%), bleeding issues 9 (15%) and due to poor compliance of medication in 4 (6.6%). Stent was deployed in LMS in 2, LAD 34, circumflex 17, RCA in 12 and 2 in venous graft. The lesion was predilated in 48 (80%) of cases and rotational atherectomy was performed prior to stent deployment in 8 (13.3%) and 3 (5%), respectively. The mean stent diameter was 3.08±0.40 mm and length 35.8±18.8 mm. No major complications were recorded during the stent deployment. No DAPT was advised in 55 (91.6%), 6 months in 1 and 12 months in 4 patients. Patients were followed up for a period of 160±84 days. Fifty three (88%) had a good medium term outcome. Five (8.3%) died during the follow up period (4 patients with either cardiogenic shock, treated PCI and VT). One patient each developed reste revascularization and subacute stent thrombosis (BioFreedom deployed after laser PCI for uncovered stent).

CONCLUSIONS The use of very short term DAPT with the BioFreedom stent in patients at high risk of bleeding events was associated with event free survival of 88% within this small case series. When prolonged DAPT is contraindicated, BioFreedom offers an alternate solution to conventional DES and DAPT.

CATEGORIES CORONARY: Stents: Drug-Eluting

KEYWORDS: Biolimus, BioMatrix family products, Bleeding