Abstract: **Mid-term outcomes after Tricuspid Annuloplasty repair using Medtronic Contour 3D annuloplasty ring**

Objective: Contour 3D annuloplasty ring allows tricuspid valve repair with a prosthesis that mirrors the 3-dimensionsal shape of the anatomical annulus. We report our 5 year outcomes of tricuspid annuloplasty using the 3D Medtronic Contour prosthesis.

Methods: We retrospectively analysed prospectively collected data (Dendrite Systems, UK) of all patients having undergone tricuspid annuloplasty (TVA) with 3D Contour tricuspid annuloplasty rings (Medtronic, USA) between January 2011 and October 2015 at our institution. SPSS v22 (IBM, USA) was used to analyse results.

Results: 56 patients with a mean age of 69.4 years (49-83) with a mean logistic euroSCORE of 14.33 (2.08-72.35) underwent tricuspid annuloplasty (TVA) with 3D Contour rings. Pre-operatively, there was moderate-severe tricuspid regurgitation (TR) in 81.1%, moderate-severe RV dysfunction in 14.5% and mean LV ejection fraction was 48.0%. Post-operatively, TV annulus size reduced by 1.62cm from 4.96±0.48cm to 3.34±0.50 ($p<0.001$), and RA size reduced from 5.18±0.83 cm to 4.63±0.73 cm ($p<0.001$). Median post-operative stay was 7 days. There were no in-hospital deaths; 30-day mortality was 0%, with 4 late deaths (12.9%) at the most recent follow-up (2-24 months). TR remained mild in 89.1% at follow-up, and freedom from TV-related re-interventions was 0%.

Conclusion:
From our experience over 5 years, we conclude that tricuspid annuloplasty with Medtronic Contour 3D ring gives excellent outcomes at an average of 9 months follow-up. Specifically, there was no 30-day mortality and there was significant reduction in the mean tricuspid annulus (7.25mm), and achieved control of TR in 89.1% of patients at follow-up.