Abstract 42 Table 2 Strain characteristics

	Pre-TAVI	Post-TAVI	p-Value
E_{ll} male (%)	−14.1 ± 4.1	−15.1 ± 4.5	0.202
E_{ll} female (%)	−14.8 ± 4.1	−14.9 ± 5.57	0.873
SR_{ll} male (%/s)	-72.5 ± 22.0	−86.7 ± 24.9	0.012
SR_{ll} female (%/s)	−84.5 ± 28.3	−95.9 ± 38.8	0.184
E_{cc} male (%)	−16.6 ± 12.7	−14.1 ± 5.1	0.273
E_{cc} female (%)	−16.2 ± 4.9	−15.8 ± 5.1	0.524
SR_{cc} male (%/s)	−74.9 ± 35.1	−82.6 ± 37.1	0.281
SR_{cc} female (%/s)	−89.3 ± 44.6	−98.2 ± 43.5	0.484

E_{ll} - longitudinal strain
SR_{ll} - longitudinal strain rate
E_{cc} - circumferential strain
SR_{cc} - circumferential strain rate

intervention. The patients were followed up for a median 187 days (IQR 93,1520).

Results During follow up, 27 patients died. Neither EuroSCORE nor STS were associated with prognosis in this cohort. EuroSCORE was not significantly associated with mortality, hazard ratio 1.33 per log unit (p = 0.28, 95% CI 0.90–2.20). This was similar to STS score, hazard ratio 1.08 per log unit (p = 0.78 95% CI 0.63 – 1.87). However, both confidence intervals are relatively wide indicating that more patients are required to substantiate this finding.

Conclusions In this small cohort of patients, it would appear that neither EuroSCORE II nor STS are associated with overall survival. This cohort included many patients with poor mobility, previous CABG with LIMA graft and significant comorbidities not included in EuroSCORE/STS calculation. The scores might therefore have underestimated the true risk. More studies and more patients are required to further assess their validity. Although such scores have been accurately validated for open-heart surgery, we recommend that they should be interpreted with caution when attempting to predict risk in patients undergoing a TAVI.

Valve disease/pericardial disease/ cardiomyopathy

44 LOCAL VERSUS GENERAL ANAESTHESIA IN TRANSCATHETER AORTIC VALVE REPLACEMENT: A TERTIARY CENTRE EXPERIENCE

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Introduction Transcatheter aortic valve replacement (TAVR) is an option for patients with severe aortic stenosis who are declined conventional surgery due to comorbidities. TAVR is conventionally performed under general anaesthesia (GA) allowing intraoperative TOE imaging. We present our experience in patients having the procedure under local anaesthesia (LA).

Aims To assess safety and length of hospital stay in patients who have a TAVI under GA compared to LA.

Methods We retrospectively assessed all the transfemoral TAVR procedures conducted at our centre from 01/03/2011 when we started performing the procedure under LA. Of 221 patients, 145 had the procedure under GA and 71 under LA. In the GA group, the devices used were Sapien XT 95%, Sapien 3 (S3) 2%, Direct Flow Medical (DFM) 5%. In the LA group the devices used where S3 64% XT 8% and DFM 28%.

Results Both groups were similar with respect to age (80.2 vs 80.9), comorbidities, Euro Score (18.5 vs 18.8) and the severity of the aortic stenosis (AVA 0.66 vs 0.67cm^2, mean/peak gradient 45.5 vs 44.2, 77.1 vs 74.5mmHg). Tranoesophageal echocardiography for aortic annular measurements was used in 79.7% of GA patients whereas CT was used in 100% of LA patients. The procedure time was significantly shorter in the LA group measured from time in room to skin closure (108 mins v 143 mins; p < 0.001). Skin open to skin closure time were the same in both groups (78 mins v 79.4 mins; p = 0.57). There was no difference in 30 day: aortic regurgitation>mild (2.06% in GA and 2.82% in LA; p = 0.744), need for permanent pacing (2.32% in GA and 1.4% in LA; P = 0.617), and cerebrovascular accidents (1.4% and 1.4%, p = 0.986). The 30 day survival was significantly different (96.5% in GA and 100% in LA; P = 0.023) as was the mean number of days in hospital (7.1 in GA and 4.6 in LA; P < 0.001). No emergency conversions to GA were performed in the LA group, although there were two planned intubations, one to convert to the transaortic approach and one to perform a femoral artery repair.

Conclusions Performing a TAVR under LA is at least as safe as GA. In addition there is a reduced procedural time and length of hospital stay. LA is a safe and cost effective alternative to GA.

45 TRANSCATHETER AORTIC VALVE REPLACEMENT : A COMPARISON OF THE DIRECT FLOW MEDICAL AND SAPIAN 3 AORTIC VALVES A – SINGLE CENTRE EXPERIENCE

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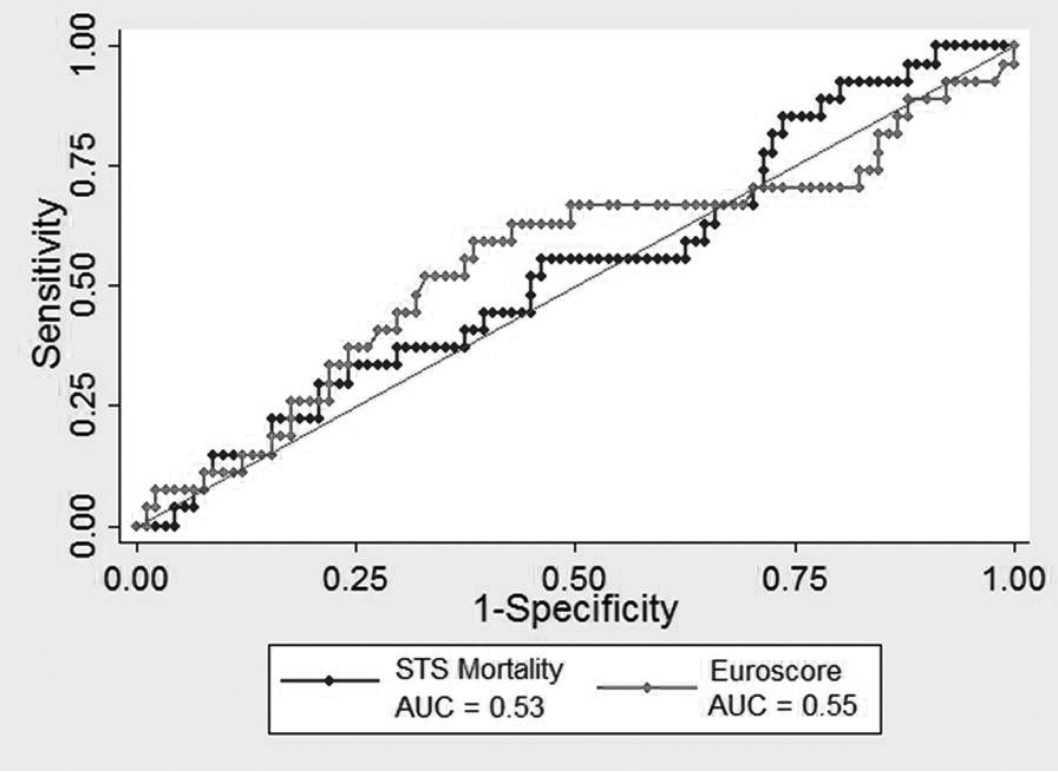
Introduction Transcatheter aortic valve replacement (TAVR) is an option for patients with severe aortic stenosis who are declined conventional surgery. The Direct Flow Medical (DFM) valve is a non-metallic, double ring valve which is repositionable and retrievable and is relatively new to the UK market.

Aims The Freeman Hospital is the highest DFM volume centre in the UK. We wanted to compare the safety of this valve with the more established Sapien 3 (S3) TAVR valve.

Methods We retrospectively assessed all the S3 and DFM TAVR procedures performed under general and local anaesthetic at our centre since 04/11/2014 when we first started using DFM. Of 71 patients, 44 had the S3 valve inserted and 27 had the DFM valve inserted. The delivery approach was trans-femoral in all patients. In the DFM group 74% of the valves were inserted under local anaesthetic (LA) compared to 26% under general anaesthetic (GA) whereas in the S3 group 88% valves were inserted under LA and 12% under GA.

Results Both groups were similar with respect to age (82 vs 80.9), comorbidities, and EuroScore (15.9 vs 16.8). The severity of aortic stenosis was significantly greater in the S3 group (mean/peak gradient 46.5 vs 39; p = 0.018 and 77.3



Abstract 43 Figure 1 Area under the curves (AUC) for both STS and Euroscore II. Both follow the diagonal line suggesting that they are not good predictors of outcome

vs 64.2mmHg; p < 0.005). Skin open to skin closure was significantly shorter in the S3 group (145 mins vs 101 mins; p < 0.001). There were no deaths or strokes in either group. 1 patient in the DFM group needed permanent pacing post procedure. 1 patient in the DFM group developed moderate aortic regurgitation. The mean gradient and peak gradient was significantly higher in the DFM group post procedure (17.9 vs 12.3; p = 0.016, and 31.1 vs 23.8mmHg; p = 0.013). In both groups there was no relationship between the size of the valve and the peak gradient using regression analysis (DFM; p = 0.181 and S3; p = 0.44). There was no difference in the mean number of days in hospital between both groups (2.6 vs 2.8; p = 0.47).

Conclusions There were no differences in safety between the Sapien 3 and DFM valves although we found the mean and peak gradients to be significantly higher with the DFM valve post procedure.

46 THE IMPACT OF PULMONARY ARTERY SYSTOLIC PRESSURE ON NEW YORK HEART ASSOCIATION FUNCTIONAL STATUS AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION

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Introduction Transcatheter aortic valve implantation (TAVI) is a therapeutic option for high surgical risk patients with symptomatic aortic stenosis. While improvements in pulmonary artery systolic pressure (PASP) following TAVI have been reported, data regarding the effect of changes in PASP on patient functional status are limited.

Methods We performed a retrospective analysis of all consecutive TAVI procedures recorded on the UK TAVI registry from our institution between January 2007 and January 2015. Functional status was defined by the New York Heart Association (NYHA) classification and PASP assessed by transthoracic echocardiography. Repeat measures of PASP and NYHA were performed prior to TAVI and at 1-, 6- and 12-– months following TAVI. Linear mixed model for repeated measures analysis was used to detect changes in PASP and NYHA over the three time points following TAVI and to measure their association. Adjusting for traditional risk factors, we subsequently evaluated whether PASP and NYHA predicted 1-year mortality following TAVI.

Results Over eight years, 299 patients (48% male, age 84 ± 8 years) underwent TAVI. During a mean follow-up of 775 days, 114 patients died. One month following TAVI, there was a significant reduction in PASP (37.3 ± 1.7 to 32.4 ± 1.7 mm Hg, p < 0.0001), which remained at 6-months (33.7 ± 1.9 mm Hg, p = 0.03), yet at 12-months the pressure had returned to baseline levels (35 ± 2.2 mm Hg). There was a significant decrease in NYHA at 1-month following TAVI (2.3 ± 0.1 to 1.5 ± 0.1, p < 0.0001). The improvement in NYHA persisted both at 6-months (1.5 ± 0.1, p < 0.0001) and at 12-months (1.6 ± 0.1, p < 0.0001) following TAVI. In linear mixed model analysis, after adjusting for left ventricular ejection fraction (LVEF), we observed an association between changes in PASP and NYHA following TAVI (coefficient 0.030 ± 0.01, p < 0.0001). An improvement in NYHA by one functional class was therefore associated with a reduction in PASP by 42 mm Hg.