predictive of CIN development (p<0.001). The SYNTAX score did not differ between those who did or did not develop CIN (p=0.188). A significant rise in serum NGAL was seen as early as 2 h post procedure in the CIN arm (p=0.03) and this persisted at 4 h (p=0.007) and 12–24 h (p=0.0015). Urine NGAL levels did not change significantly during the first 24 h. Neither albumin:creatinine ratio (p=0.149) or protein:creatinine ratio (p=0.635) predicted development of CIN.

Abstract 23 Table 1

	No CIN outcome (n=169)	CIN outcome (n=39)	p Value
Age, (mean, SD)	70.8 (8.5)	71.5 (9.5)	0.64
Hypertension (%)	155 (91.7)	33 (86.8)	0.35
Hyperlipidaemia (%)	165 (97.6)	37 (97.4)	0.92
Previous MI (%)	66 (39.1)	15 (39.5)	0.96
Ex or current smoker (%)	96 (55.9)	19 (50.0)	0.75
Heart failure (%)	32 (19.1)	7 (18.4)	0.93
Valvular heart disease (%)	28 (16.6)	7 (18.4)	0.78
Family history IHD (%)	84 (49.7)	20 (52.6)	0.74
BMI, (mean, SD)	28.6 (5.4)	29.2 (6.1)	0.54

Conclusions The current gold standard for measuring CIN is a rise in serum creatinine but this is of limited value as it does not increase until 48–72 h post renal injury. Neither the SYNTAX score, nor urinary albuminuria or proteinuria are predictive of CIN development. A rise in serum NGAL levels within the first 12 h following coronary angiography or PCI appears to be a very promising marker in the early diagnosis of CIN.

24 PERCUTANEOUS MITRAL VALVE REPAIR WITH THE MITRACLIP DEVICE: A TERTIARY CARDIAC UK EXPERIENCE

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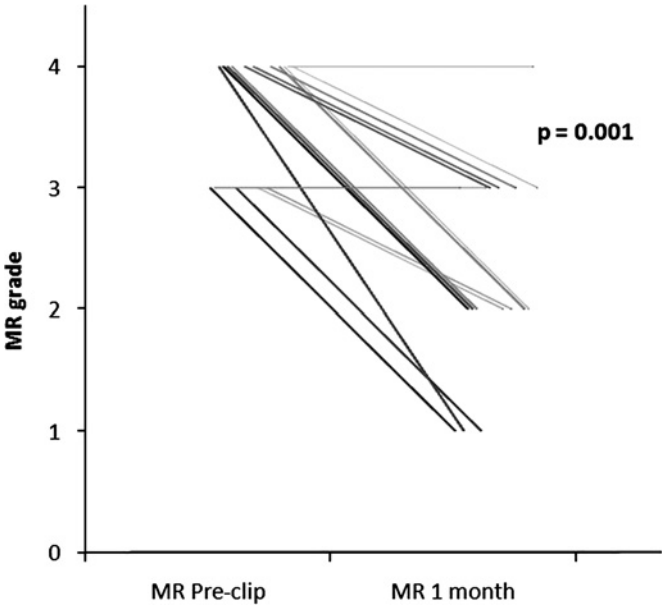
Introduction Percutaneous mitral valve repair using the transcatheter Mitraclip device is a novel therapy for patients with severe mitral regurgitation (MR) who are too high risk for conventional surgery. We report the largest UK series to date.

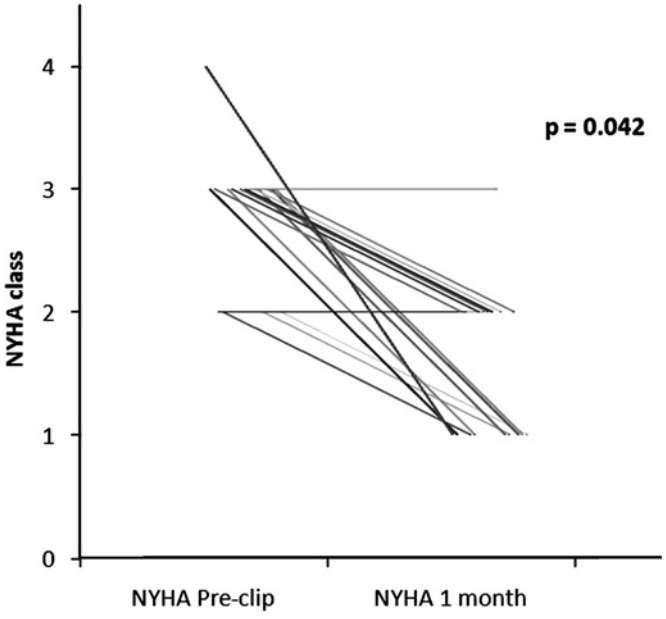
Methods Patients were screened with transthoracic (TTE) and transoesophageal echocardiography (TOE). Mitral regurgitation was graded by British Society of Echocardiography criteria. Twenty-four patients with ≥ grade 3+ symptomatic MR underwent percutaneous mitral valve repair under general anaesthesia between February 2009 and October 2010. The Mitraclip device was deployed under 2- and 3-Dimensional TOE and fluoroscopic guidance. All patients were discussed with the manufacturing company (Evalve) and in a multidisciplinary meeting including >2 cardiologists and 2 cardiothoracic surgeons with a special interest in mitral valve surgery prior to being accepted.

Results Mitraclip therapy was attempted in 24 patients aged 71±11 years with an average Euroscore of 16%. The indication for intervention was functional MR in 10 patients (42%), ischaemic MR in 7 patients (29%) and degenerative MR in 7 patients (29%). Twenty patients had successful deployment of the Mitraclip device (83%). Fifteen patients (75%) had 2 clips deployed. There were no vascular complications or strokes. We were unable to grasp the mitral valve leaflets in 2 patients due to an excessive coaptation gap. There was 1 procedural death due to leaflet tear in a patient with end-stage ischaemic cardiomyopathy and a grossly dilated left ventricle. All patients (100%) treated with the Mitraclip had severe MR (grade 3 +/4+) prior to intervention. Mitral regurgitation was graded by colour Doppler alone following intervention as standard quantitative analyses are not validated in the presence of a Mitraclip. At 1-month follow-up to date, 10 patients (59%) had a reduction in MR to ≤ grade 2+ and 8 patients (47%) had ≥2 grade reduction in MR (p=0.001). The reduction in MR grade remained significant for the 8 patients with echo data at 6-month follow-up (p=0.038). One patient had persistent grade 3+ MR at 1-month follow-up due to late partial detachment of one of the 2 clips deployed. NYHA class reduced significantly following intervention. Prior to Mitraclip, 63% of patients were in NYHA class III/IV. At 1-month follow-up post-Mitraclip only one patient (4%) was in NYHA class III (p=0.042) and 15 patients (83%) had at least 1 grade reduction in NYHA class. There was no significant change in left ventricular size following intervention, although there was a trend towards reduced left ventricular volumes at 1-month follow-up (end diastolic volume 175 vs 160 ml, p=0.102; end systolic volume 92 vs 79 ml, p=0.076).

Conclusion In selected patients Mitraclip edge-to-edge repair successfully reduces the severity of mitral regurgitation and improves symptoms. Further studies are needed to examine whether these results are durable and associated with improved outcome.



Abstract Figure 1 Change in MR grade post-Mitraclip.



Abstract Figure 2 Change in NYHA class post-Mitraclip.