

with hypertension (OR 0.900), hyperlipidaemia (OR 0.836) and type 2 diabetes (OR 0.860) had significantly lower mortality rates. Adjusted mortality rates were also lower in widowed patients with hypertension (OR 0.973) and in both widowed and separated patients with type 2 diabetes (OR 0.965 and 0.974, respectively). Conversely, unmarried patients had significantly raised adjusted mortality rates in type diabetes (OR 1.046) and in hypertension (1.034).

Conclusion Single patients with modifiable risk factors have significantly higher mortality rates compared to married patients which could help to explain the raised mortality rates documented in single patients following an acute coronary syndrome. Protective effects of marriage likely result from increased social support leading to healthier lifestyles and increased medication compliance. Our findings suggest a need for increased social support for single patients with modifiable cardiovascular risk factors.

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OXIDISED LDL LEVELS CORRELATE WITH LIPOPROTEIN (A) LEVELS AND ARE REDUCED BY LIPOPROTEIN APHERESIS IN A RANDOMISED STUDY ON PATIENTS WITH REFRACTORY ANGINA AND RAISED LIPOPROTEIN(A)

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Introduction Lipoprotein apheresis (LA), an extra-corporeal lipid lowering technique is a promising new therapeutic technique for the treatment of coronary artery disease. Patients with high levels of Lipoprotein(a) but normal cholesterol levels are challenging to treat, and therefore this technique offers a novel therapeutic avenue. Levels of oxLDL are well known to correlate with both the degree of atherosclerosis in patients, as well as their risk of cardiovascular events. Antibodies against oxLDL are recognised to form immune complexes and are implicated in the clearance of oxLDL.

Methods We tested the effect of LA on levels of oxLDL as well and anti-oxLDL antibody levels as a sub-study of a randomised controlled trial in 20 patients with refractory angina, raised Lp(a)>500 mg/L and LDL cholesterol<4 mmol/L (average baseline level was 2.16 mmol/L) with three months of blinded weekly LA or sham, followed by crossover. Enzyme-linked immunosorbent assays (ELISA) were used to measure levels of MDA-LDL (oxLDL), as well as IgG and IgM anti oxLDL antibody levels at baseline as well as after 3 month periods of active and sham treatment.

Results Baseline oxLDL levels were correlated with both baseline LDL ($r=0.69$, $p=0.001$) and Lp(a) levels ($r=0.63$; $p=0.03$). OxLDL was reduced by 30% after apheresis. There was a mean drop of -0.11 units (U) (95% CI $-0.13, -0.09$) from 0.37 ± 0.06 to 0.26 ± 0.04 . During sham oxLDL levels did not change significantly with a mean change of -0.01 (95% CI $-0.04, 0.02$) from 0.35 ± 0.07 to 0.34 ± 0.07 ($p<0.0001$ between treatment arms). IgG and IgM anti-oxLDL levels were both reduced by 22% after apheresis; IgG from 0.61 ± 0.21 to 0.47 ± 0.20 ; $p=0.0036$ (optical density units, [ODU]); whilst IgM was reduced by a median value of 0.15 ODU from 0.66 ± 0.43 to 0.54 ± 0.36 ; $p=0.012$. IgG and IgM anti-oxLDL levels were not affected by the sham procedure.

Conclusions LA significantly reduced oxLDL levels as well as anti-oxLDL antibody levels in patients with raised Lp(a). Whilst the mechanism could be due to the direct binding of all the studied proteins to the charged dextran column of the apheresis apparatus, it is more likely that the reduction of anti-oxLDL antibodies is the result of IgG- and IgM-oxLDL immune complex depletion via lipoprotein extraction by the column. We have previously reported a therapeutic benefit of LA on this patient population. Given the pathogenic role of oxidised LDL in coronary artery disease, it is plausible that these demonstrable reductions in oxLDL and their associated antibodies (or immune complexes) may represent one of the mechanisms by which LA leads to clinical benefits in patients with refractory angina and raised Lp(a).

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SIGNIFICANT MUTUAL SERVICE BENEFITS FROM A REGULAR ANAESTHETIC PRE-ASSESSMENT CARDIOLOGY MULTIDISCIPLINARY TEAM MEETING

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Introduction Cardiovascular complications are one of the major causes of mortality and morbidity perioperatively. Anaesthetic assessment involving a cardiologist reduces peri-operative cardiovascular complications; however assessment in the outpatient setting can incur significant waiting times. A weekly cardiology, anaesthetic and pre-assessment multidisciplinary team (MDT) meeting was introduced with the aim of reducing the time taken to optimise patients for anaesthesia and reduce the burden on the cardiology outpatient waiting list.

Methods A weekly MDT was commenced in October 2015, discussing patients who posed a cardiovascular concern to the pre-assessment unit. Outcomes measured included time taken to be optimised for anaesthesia, need for cardiology outpatient review and investigations required. A comparison was made between those seen in pre-assessment clinic, prior to the initiation of the MDT (retrospective) and those discussed in MDT (prospective). A six month period, October-April, one year apart was studied. The data was collected from an electronic Pre-assessment system designed in our institution.

Results In the prospective period, 80 patients were discussed, with an average of 10 min being spent discussing each patient. There was a 10% reduction in number of investigation performed. The number of patients requiring formal cardiology outpatient review was significantly reduced in the prospective group (10/80) compared to the retrospective group (50/50) ($p=0.0001$). The time taken to optimise patients for anaesthesia was reduced by 76 days ($p=0.0002$) by introducing the MDT. This 49% reduction was achieved without an increase in cardiac testing.

Abstract 95 Table 1

	Retrospective	Prospective
Number sent for Cardiology outpatient review	50/50	10/80
Average time to optimisation (days)	155	79
Percentage of patients sent for further investigation	54	44

Conclusions We have shown that the vast majority of patients deemed to require preoperative cardiac review can be dealt with efficiently through an MDT meeting, with a resulting reduction in the number of outpatient cardiology reviews and in the optimisation time for anaesthesia. The reduction of 70 patients requiring outpatient cardiology opinion equates to 11 fewer cardiology clinics in a 6 month period; the time taken per patient is shorter in the MDT setting. The 10% reduction in the number of cardiac investigations requested in the prospective group was contrary to one of our hypotheses. Four patients were entered into the aortic surveillance clinic without their anaesthesia being delayed, as valve surgery was not needed. Cardiology outpatient efficiency was improved as patients were referred with all appropriate investigations already performed. The MDT at the Royal Glamorgan Hospital has changed how the pre-assessment unit obtain a cardiology opinion with demonstrable quality improvements via collaboration between cardiologists and anaesthetists, with improved patient care.

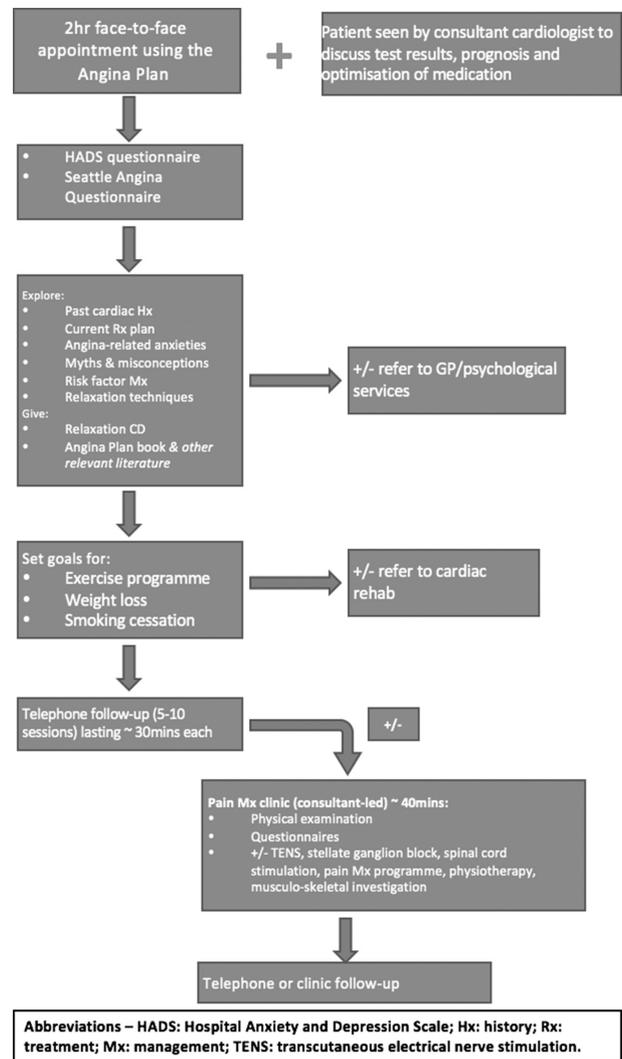
96 THE IMPACT OF A MULTI-DISCIPLINARY CARE PATHWAY FOR PATIENTS WITH REFRACTORY ANGINA ON PSYCHOSOCIAL OUTCOMES, QUALITY OF LIFE AND MEDICATION

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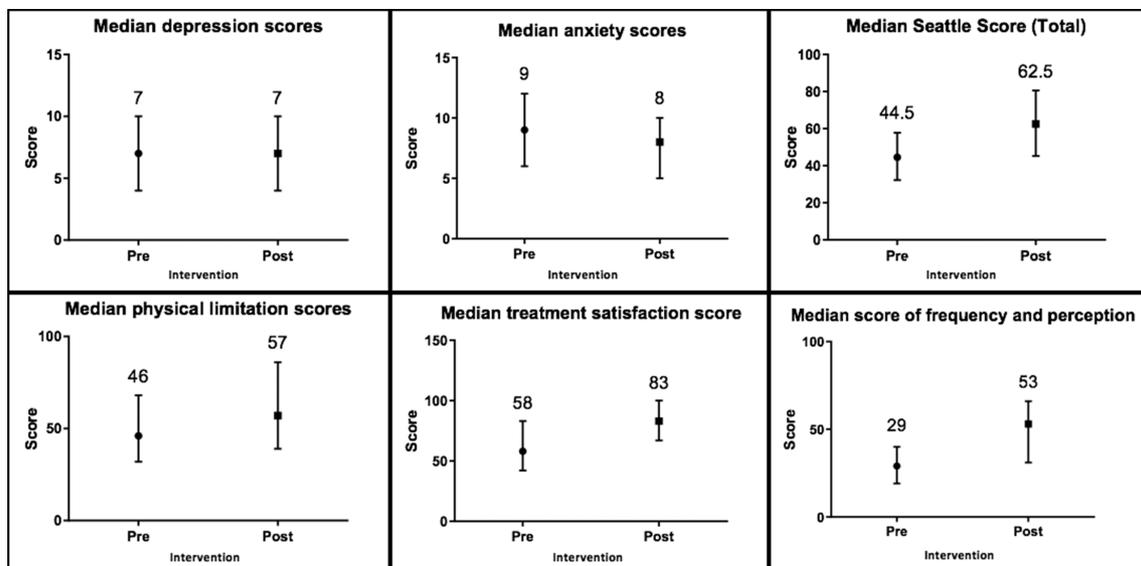
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Introduction Refractory angina (RA) is a growing clinical problem due to improved survival from coronary artery disease (CAD) and an ageing population. These no option patients experience chronic angina-type pain, in the context of CAD, despite optimal medical and revascularisation therapies. Consequently, management of these patients is challenging and outcomes remain suboptimal. As mortality is no worse, the focus of treatment has shifted to improving symptoms, quality of life (QoL) and psychosocial outcomes.

Methods We undertook a single-centre study of the impact of a multi-disciplinary care pathway (Figure 1) on psychosocial



Abstract 96 Figure 1 Schematic showing the multi-disciplinary care pathway for refractory angina at the Royal Brompton Hospital.



Abstract 96 Figure 2 Graphs showing psychosocial and quality of life scores before after intervention.