



Periprocedural vascular access site complications during coronary angioplasty are independently associated with adverse short and long-term mortality

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lower in the less than 90 minute DTB time group (hazard ratio 1.97, 95% CI 1.31 to 2.97, $p = 0.001$).

Conclusions: The majority of patients treated with PPCI at our institution achieve DTB times of less than 90 minutes. Shorter DTB times are associated with a halving of in-hospital mortality and a 6.2% absolute reduction in mortality at 3 years. Reducing DTB times should therefore remain a high priority when establishing a PPCI service and should be subject to regular audit.

009 PERIPROCEDURAL VASCULAR ACCESS SITE COMPLICATIONS DURING CORONARY ANGIOPLASTY ARE INDEPENDENTLY ASSOCIATED WITH ADVERSE SHORT AND LONG-TERM MORTALITY

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Introduction: Studies have linked bleeding during percutaneous coronary intervention (PCI) with adverse short and long-term outcomes. However, the specific impact of vascular access complications after contemporary PCI and outcomes is less well established.

Methods: A retrospective database analysis of 7314 consecutive patients undergoing PCI via the femoral route at the Washington Hospital Centre was performed. Vascular complications were defined as femoral haematoma greater than 5 cm in diameter, retroperitoneal bleeding, arteriovenous fistula, pseudoaneurysm and any surgical repair of a vascular access site.

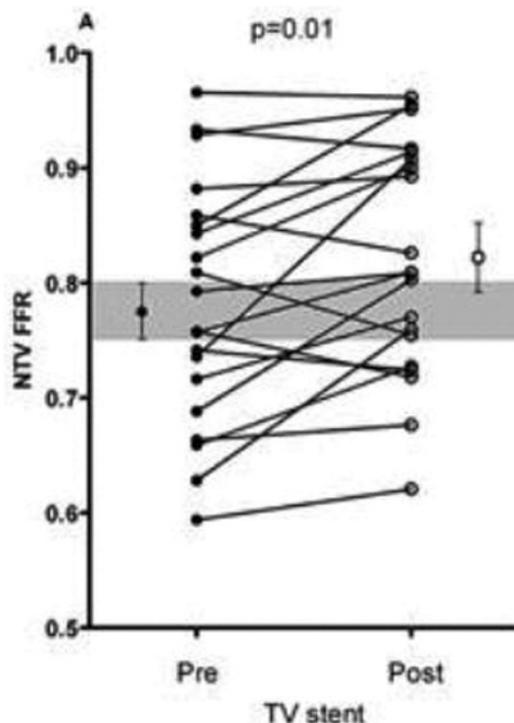
Results: A vascular access site complication occurred in 405 patients (5.9%) and their occurrence was independently associated with age, low body mass index, female sex, shock, glycoprotein receptor antagonist use and chronic renal impairment. The use of bivalirudin was associated with a lower incidence of access site complications. Length of stay was more prolonged (6.3 days vs 2.9 days, $p < 0.001$) and stent thrombosis more common (1.2% vs 0.1%, $p < 0.001$) in patients with access site complications. Mortality at 30 days (7.7% vs 2.4%, $p < 0.001$) and at 1 year (14.9% vs 6.6%, $p < 0.001$) was significantly higher in those patients with a vascular access site complication. Independent predictors of 1-year death were age (odds ratio (OR) 1.1 for every year), periprocedural stroke (OR 7.7), blood transfusion (OR 3.1), chronic renal insufficiency (OR 2.5), diabetes (OR 1.8) and vascular access site complications (OR 1.4). The occurrence of a femoral haematoma was an independent predictor of in-hospital and 30-day mortality, with a stepwise increase in the association as the haematoma size increased (as assessed by observed haematocrit drop).

Conclusions: Periprocedural vascular access site complications are independently associated with poor patient outcomes after PCI. Of importance, isolated femoral artery haematomas also appear to infer an adverse outcome. These data highlight the importance of careful access route choice and selective adjunctive pharmacotherapy utilisation during PCI.

010 ELECTIVE CORONARY STENTING OF THE TARGET VESSEL AFFECTS THE FRACTIONAL FLOW RESERVE VALUE OF A STENOSIS IN THE NON-TARGET VESSEL: CLINICAL IMPLICATIONS FOR ASSESSING MULTIVESSEL DISEASE WITH A PRESSURE WIRE

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Introduction: Functional lesion assessment by fractional flow reserve (FFR) has the potential to guide multivessel disease (MVD) percutaneous coronary intervention (PCI) and improve outcome. However, the effect of target vessel stenting on subsequent FFR



Abstract 010 Figure FFR, fractional flow reserve; NTV, non-target vessel; TV, target vessel.

measurements in the non-target vessel stenosis is unknown. We hypothesised that target vessel stenting would change the non-target vessel FFR due to microvascular resistance perturbation.

Methods and Results: We recruited 30 patients (age 64.4 years, 19% female) with MVD (>50% stenosis in ≥ 2 vessels >2.5 mm in diameter) awaiting elective PCI. A Radi pressure-wire was placed in the non-target vessel distal to the stenosis and distal pressure, aortic pressure and saline bolus thermodilution transit time (T_{mn}) were measured at baseline and during adenosine-induced maximal hyperaemia (140 $\mu\text{g}/\text{kg}$ per minute via the femoral vein). Measurements were recorded in the non-target vessel before and after stenting the target vessel. FFR, coronary flow reserve (CFR) and index of microvascular resistance (IMR) were calculated for the non-target vessel and the values compared. FFR increased in the non-target vessel after stenting the target vessel (0.82 (0.02) vs 0.84 (0.02), $p = 0.06$). This was particularly apparent in patients with low IMR at baseline ($n = 20$, 0.78 (0.02) vs 0.82 (0.02), $p = 0.01$), in whom a significant increase in IMR (10.4 (0.9) vs 15.6 (2.1), $p = 0.03$) and a reduction in CFR (2.9 (0.3) vs 2.2 (0.3), $p = 0.02$; fig) were observed.

Conclusion: Elective target vessel stent implantation increases non-target vessel FFR values due to an increase in remote microvascular resistance that diminishes coronary flow. This has clinical implications in the guidance of MVD PCI using pressure wire.

011 THE IMPACT OF EXPANSION OF A PRIMARY PERCUTANEOUS CORONARY INTERVENTION SERVICE ON DOOR-TO-BALLOON TIME AND NEED FOR THROMBOLYSIS IN PATIENTS PRESENTING WITH ST ELEVATION MYOCARDIAL INFARCTION IN WEST YORKSHIRE

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Introduction: Recent Department of Health guidance suggests primary percutaneous coronary intervention (PCI) should be the