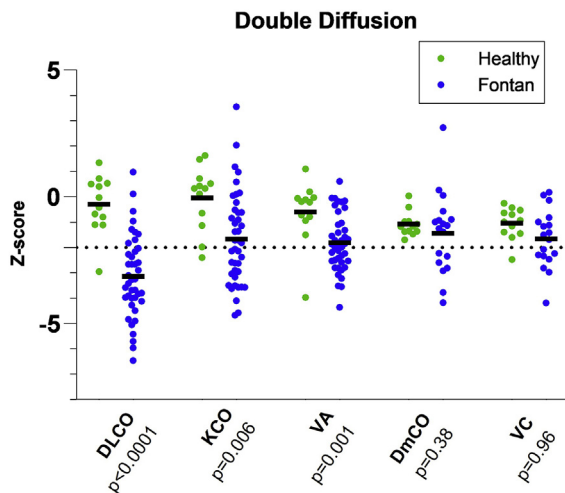


ventricular and atrioventricular-valve function and CPET performed in Fontan patients.

Results: Compared to healthy controls, Fontan patients had lower FEV1_{Z-score}, FVC_{Z-score}, X5_{Z-score}, and equivalent FEV1/FVC, R5_{Z-score} and LCI. As expected DLCO_{Z-score} was much lower in Fontan subjects and this was not related to VC_{Z-score} but mainly to lower VA_{Z-score} and in some patients lower DmCO_{Z-score}. Both DmCO_{Z-score} (r=0.6, p=0.006) and VA_{Z-score} (r=0.41, p=0.009) were associated with X5_{Z-score}. Neither CPET nor echo parameters were associated with lung function. Older age at Fontan completion was associated with lower FEV1_{Z-score}, FVC_{Z-score}, VA_{Z-score} and X5_{Z-score}.

Conclusion: In Fontan patients, abnormal gas transfer and lung elastance is primarily related to low alveolar volume, and additionally abnormal capillary membrane function. Earlier Fontan completion may be beneficial in optimising lung function in Fontan patients.



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Prevention Prize Finalists (039–042)

039

Effects of Low-dose Triple Combination Therapy on Time at Target Blood Pressure – Results From the TRIUMPH Randomized Controlled Trial

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Background: Cumulative exposure to hypertension is an adverse prognostic marker. However, longitudinal assessments of blood pressure (BP) control, e.g., Time at Target

(TITRE), are not routinely assessed. We determined whether low-dose triple combination antihypertensive therapy achieved greater TITRE compared to usual care.

Methods: TRIUMPH (TRiple pill vs Usual care Management for Patients with mild-to-moderate Hypertension) was a randomised controlled trial including 700 patients (age, 56±11 yrs) requiring initiation or escalation of antihypertensive therapy. Patients from hospital clinics in Sri Lanka were randomised to once-daily single pill combination (telmisartan-20mg/amlodipine-2.5mg/chlorthalidone-12.5mg) or standard care. Between-group differences in TITRE were compared over 24wks, with TITRE defined as percentage of time at target BP (<140/<90 mmHg).

Results: Patients allocated the triple pill (n=349) achieved higher TITRE compared to standard care (n=351) over 24wks (64% vs 43%, risk difference 21%, 95%CI 6-26%, p<0.001). Almost twice as many patients on the triple pill spent the majority of time at target (TITRE>50%: 64% vs 37%, p<0.001). The effect of the triple pill was seen early, with most achieving TITRE>50% by 12wks. When predictors of TITRE were examined, only triple pill therapy was predictive of TITRE>50% (OR 3.41; 95%CI, 2.30-5.04, p<0.001) but patients with diabetes (OR 0.18; 95%CI, 0.10-0.31) and elevated baseline systolic BP (OR 0.97; 95%CI, 0.95-0.99) were less likely to achieve TITRE>50%.

Conclusions: Among patients with mild-moderate hypertension, treatment with a low-dose triple combination pill substantially increased time at BP target compared to usual care. This study introduces TITRE as a novel longitudinal preventative care outcome in clinical trials.

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040

Percutaneous Coronary Intervention (PCI) Accounts for Fall in Long-Term Mortality in ST-Elevation Myocardial Infarction (STEMI) from 2003-2016 in New South Wales, Australia: A Population-Linkage Data Analysis

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Background: Reperfusion for STEMI is optimally achieved by timely performance of PCI which has become more widely available in Australia in recent years. We evaluated the association between frequency of PCI for STEMI and mortality over a 13-year period in a state-wide cohort.

Methods: Patients diagnosed with STEMI were identified from the NSW Admitted-Patient-Data-Collection registry from 2003-2016 and linked to the Death registry to 31-December-2018. We calculated the rate of PCI over time, and the long-term all-cause mortality risk for those who underwent PCI was determined after adjusting for year of PCI, age, and sex.