

P296

P296 -The association of Diastolic Blood Pressure control with clinical outcomes in incident haemodialysis patients

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Introduction:

In the Republic of Ireland End Stage Kidney Disease (ESKD) has an incidence of 85-95 per-million, per-annum. Most patients (70-75%) enter ESKD on Haemodialysis (HD). One-year survival in incident ESKD patients is 95% in <65years and 89% in >64years. Five-year survival is 75% and 47% respectively.

Cardiovascular Disease is the commonest cause of death.

Hypertension, which is often difficult to control, is extremely common in Haemodialysis (HD) patients. It has been proposed that the level of Diastolic Blood Pressure (DBP) control in the early phase on HD is a strong predictor of future cardiovascular (CV) events.

Aims and Objectives:

The aim of this study was to establish if the level of BP control in the incident period (first 13 weeks) is associated with subsequent CV events in chronic HD patients.

Methods:

A retrospective observational cohort study of a single centre dialysis unit Kidney Disease Clinical Patient Management System was performed.

Data were extracted for incident ESKD patients starting longterm HD from October 2012 to August 2017 in the single centre. Patients excluded were those: whose first renal replacement treatment was not HD; and who died or transferred to Peritoneal Dialysis within the first 13 weeks. Appropriate demographic and medical profiling was performed.

The mean pre-HD and post-HD BP in the first 13 weeks of treatment was calculated for all patients, and the influence of this and other collected variables on a composite of future Major Adverse Cardiac Events (MACE) was evaluated.

Results:

126 patients were studied; 84 (66%) were male. Mean age of patients initiating HD was 65 (range: 29-89) years. Mean duration of follow-up was 27.1 (range: 6-67) months. Fifty-four (43%) patients had Diabetes. Thirty-seven (29%) patients experienced a CV event over follow-up, and 46 (37%) died. In total 46 (37%) patients attained the outcome of a composite MACE. Life-table analysis found the cumulative proportion with a composite MACE endpoint at 1, 2 and 3-years follow-up was 19%, 37% and 49%.

Time-to-event analysis using univariate ($p < 0.001$) and multivariate ($p < 0.025$) analysis indicated that the only variable associated with an increased risk of a new composite MACE was the existence of a previous CV event. Age, Gender and Diabetes were not associated with increased risk, nor were age or tertiles of mean pre-HD or post-HD BP.

Conclusion:

This population has a high cumulative frequency of CV events. Patient profile at initiation was significantly associated with these, but the level of BP control in the first 13 weeks within this modestly sized study was not.