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P287 -Impact of major vascular intervention for peripheral vascular disease among diabetic patients on Haemodialysis – A retrospective study

Dr Sivaramkrishnan Ramanarayanan¹, Dr Suresh Mathavakannan¹, Dr Praveen Jeevaratnam¹, Dr Enric Vilar^{1,2}, Dr Raja Mohammad Kaja Kamal^{1,2}, Prof Ken Farrington^{1,2}

¹Lister Hospital, East And North Hertfordshire Nhs Trust, Stevenage, United Kingdom, ²University Of Hertfordshire, Hatfield, United Kingdom

Introduction

Severe peripheral vascular disease (PVD) that requires major vascular intervention is a significant co-morbidity among diabetic haemodialysis population. The effect of such interventions on survival is not known. We collected retrospective data of all diabetic haemodialysis patients to estimate the burden of peripheral vascular disease requiring intervention in this population and its impact on survival.

Methods

We identified 350 diabetic HD patients who had undergone haemodialysis between 1988 to 2012 under the care of the Lister Hospital. 55 of these had required an intervention defined as an amputation event (either whole limb, transmetatarsal or toe), a major debridement, surgical or radiological revascularisation, including an arterial angioplasty +/- stent, and embolectomies. A small number of patients were offered but declined amputation, preferring a conservative approach. This too was counted as a 'vascular intervention'. We compared survival between those patients who required intervention with those who did not. We then compared post-intervention survival between those patients who underwent the intervention and a matched cohort of 50 patients selected from non-intervention group matched for date of dialysis initiation, age at initiation, gender and type of diabetes. The post-intervention survival for matched non-intervention patients was estimated from the day the matched patient in the intervention group had the intervention. Kaplan-Meier analysis was used to compare survival and Cox-regression analysis was performed to predict whether the requirement of an intervention predicted patient's dialysis survival and post intervention survival after correcting for age, gender and ethnicity.

Results

78% of patients in the intervention group and 68% of patients in the non-intervention group were Caucasians ($p=0.36$). Around 68% of patients in each group were males. The mean age of starting dialysis was 58.4 years in the intervention group and 61.5 years in the non-intervention group ($p=0.11$).

Approximately 1 in 4 diabetic HD patients who survive 5 years had undergone a vascular intervention, by 10 years approximately 1 in 3 and in those small numbers surviving 15 years approximately one in two. Survival was generally poor. Mortality at 5 years 50%, and by 10 years was 85%. However, there was no significant difference in survival between diabetic dialysis patients who required intervention versus who did not. On Cox-regression analysis requirement of an intervention was not an independent predictor of mortality risk adjusted for age, sex and ethnicity. When post intervention survival was calculated between the two matched groups there was no significant difference in the crude or adjusted post-intervention survival.

Conclusion

Although PVD requiring major intervention is a significant co-morbidity among diabetic dialysis population the intervention did not independently predict dialysis survival or post-intervention survival. This might partly be due to the overall poor survival of this group due to co-existing cardiovascular disease and a higher incidence of cardiovascular events due to non-traditional risk factors.