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Outcome of renal transplantation in systemic amyloidosis

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Introduction

Systemic amyloidosis accounts for approximately 0.8% of end stage renal disease in the UK.

Outcomes following renal transplantation in systemic amyloidosis were historically poor, but there is a paucity of data following recent therapeutic advances which have benefitted patients with systemic amyloidosis.

We aimed to determine renal allograft and patient survival in UK patients with end stage renal disease and systemic amyloidosis.

Method

We measured patient and death censored graft survival for 92 patients with systemic AA (n=48) and AL (n=44) amyloidosis being followed at the UK National Amyloidosis Centre (NAC) who underwent renal transplantation between 1989 and 2018. This was compared to age-matched renal transplant recipients with diabetic and non-diabetic nephropathy from the NHSBT database. All amyloidosis patients had a diagnosis prior to transplantation.

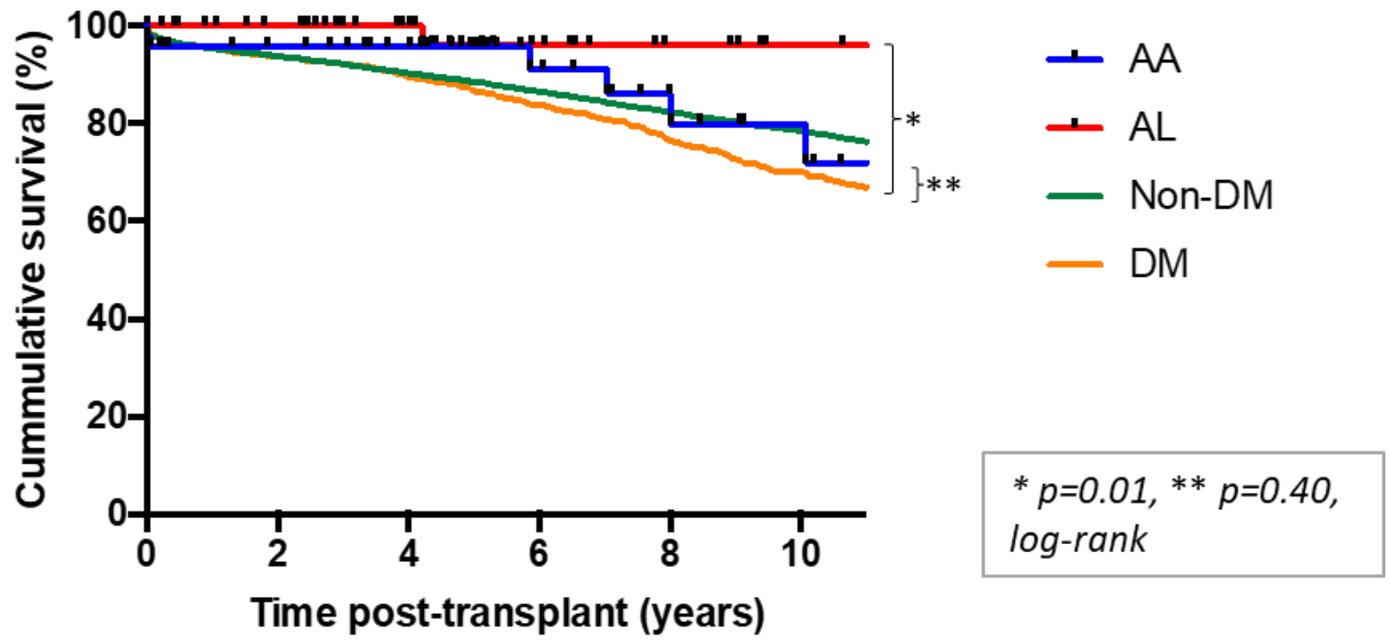
Results

Death-censored graft survival at 1,3,5 and 10 years was:
96%, 96%, 96% and 81% in AA amyloidosis
98%, 98%, 93% and 93% in AL amyloidosis

Overall patient survival at 1, 3, 5 and 10 years was: 92%, 92%, 81% and 68% in AA amyloidosis
95%, 93%, 76% and 34% in AL amyloidosis

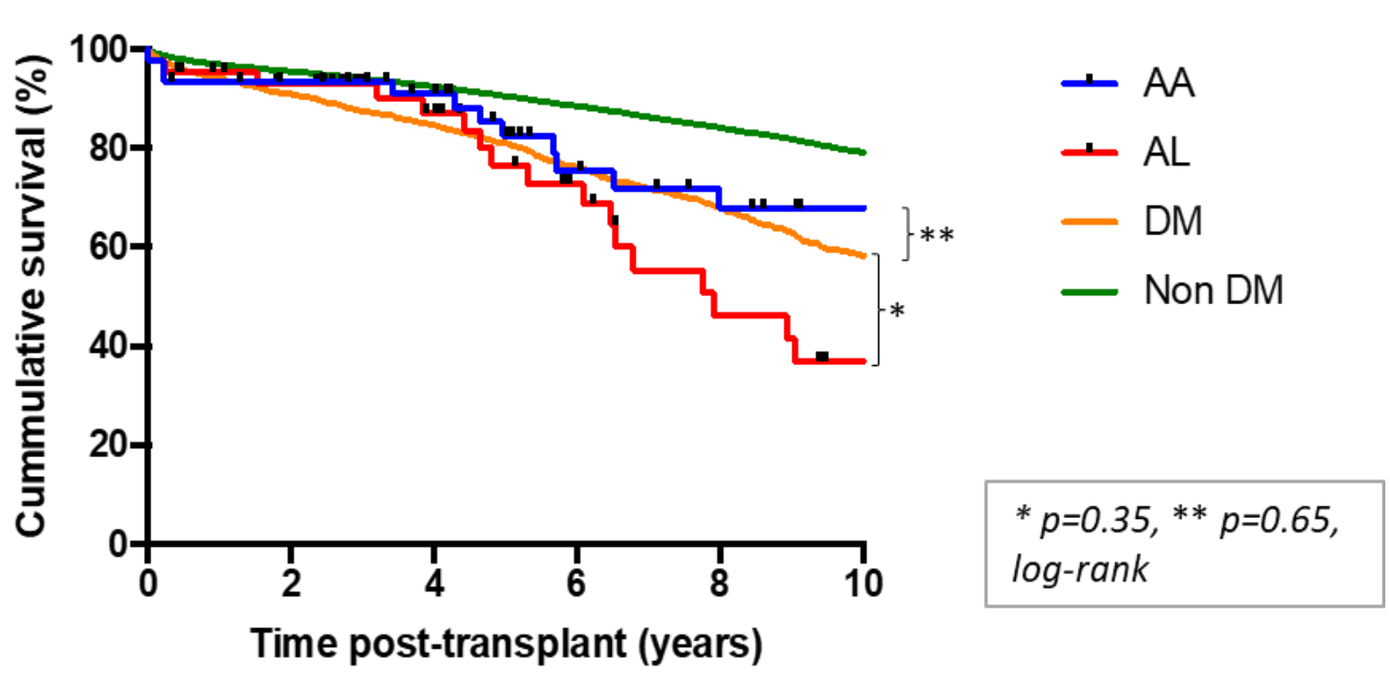
Causes of graft loss included:
Death with functioning allograft (25 patients)
Operative complications / acute rejection (3 patients)
Recurrent amyloidosis (3 patients – all AA amyloid)
Multifactorial including recurrent amyloid (2 AA,

Death Censored Graft Survival



** p=0.01, ** p=0.40, log-rank*

Patient Survival



** p=0.35, ** p=0.65, log-rank*

Discussion

Amyloidosis patients transplanted had been extensively reviewed in transplant assessment and do not reflect the amyloidosis population as a whole.

Patient and renal allograft survival following renal transplantation in AA amyloidosis is similar to that in diabetic nephropathy.

Death-censored renal allograft survival in AL is excellent reflecting prevention of recurrence of amyloid in renal allografts by successful suppression of the underlying clonal dyscrasia with chemotherapy.

Patient survival in AL amyloidosis trends towards being poorer than diabetic age matched controls although does not meet statistical significance.

This data indicates that carefully selected patients with systemic amyloidosis can achieve good outcomes following renal transplantation.

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