

BACKGROUND

The incidence of dialysis dependence (DD) is **approximately 5%** in multiple myeloma (MM) patients who develop renal failure (RF). Current studies show autologous stem cell transplantation (ASCT) is both safe and effective in dialysis-dependent MM patients. Their response rates and survival outcomes are comparable to non-dialysis-dependent populations, with dose-adjusted melphalan showing reduced nephrotoxicity compared to the standard 200 mg/m² dose.

Our objective is to describe our center's experience with ASCT in patients with gammopathy and dialysis-dependent renal failure.

RESULTS

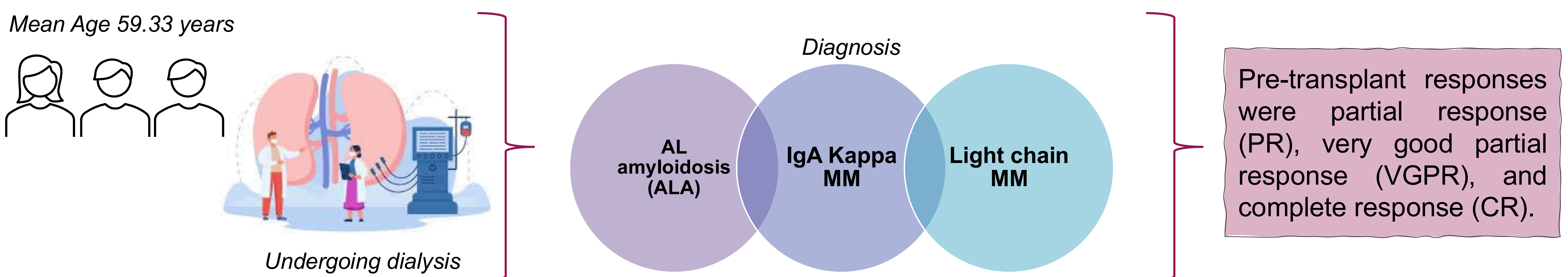


Table 1: The first five days of transplant protocol for dialysis patients at our centre

1 st (-2)	2 nd (-1)	3 rd +/- 4 th DAYS (0) *	4 th OR 5 th (+1 or +2)
Central venous catheter insertion		Dialysis at 8 am	
Prehydration (sodium chloride 0.9% 100ml/h 2h)	Reinforcement on antiemetics	First hematopoietic progenitor cells infusion (at 3 rd day)	Continue dialysis as usual
Melphalan 120mg/kg		Second hematopoietic progenitor cells infusion (at 4 th day if needed)	
Posthydration (same as prehydration)			

* Depending on the need to infuse on a single day or multiple days

Table 2: Variables collected during ASCT in dialysis patients

Diagnoses	Mobilising factor	CD34+ counts	N° apheresis session	Transplant protocol	Neutrophil recovery day	Platelet recovery day	Complications	Response on day +100	Time to reach strict CR	Post-transplant maintenance	Kidney function recovery
IgA Kappa MM	G-CSF + plerixafor	3.44x106/Kg	1	Table 1	+13	+20	Neutropenic colitis	VGPR	5 months	Lenalidomide	spontaneous recovery after ASCT
ALA	G-CSF + plerixafor	2.71x106/Kg	3	Table 1	+19	+21	-	VGPR	8 months	Lenalidomide	successful renal transplantation
Light chain MM	G-CSF + 50%-adjusted etoposide	15.43x106/Kg	1	Table 1	+12	+15	Aspergillus pulmonary infection	PR	29 months	Daratumumab	successful renal transplantation

CONCLUSION

In our limited experience, we confirm the safety and survival of patients with MM and DD undergoing ASCT.

Further studies are needed to establish optimal strategies for mobilization and apheresis in DD patients with gammopathy, as well as to determine which factors influence renal function recovery, avoiding the need for dialysis and/or subsequent renal transplantation.

1. El Fakih R, Fox P, Popat U, Nieto Y, Shah N, Parmar S, et al. Autologous Hematopoietic Stem Cell Transplantation in Dialysis-Dependent Myeloma Patients. *Clin Lymphoma Myeloma Leuk.* 2015 August; 15(8):472-476. doi:10.1016/j.clml.2015.03.003.
2. Lazana L, Floro L, Christmas T, Shah S, Bramham K, Cuthill K, et al. Autologous stem cell transplantation for multiple myeloma patients with chronic kidney disease: a safe and effective option. *Springer nature.* 2022 April.

To the **patients** for their incredible perseverance and **resilience**.
To **my mentors** for giving me the **opportunity** to learn about and treat cases **like these**.