

Outcomes of kidney transplantation in patients with Fabry disease: real world experience



Oana R. Ailioaie, MD, PhD,^{1,4} Iulia Jurca-Simina MD, PhD,¹ Oana Atanasiu, MD,¹ Lavinia M Bernea, MD,¹ Audrey Cordier,¹ Jean-Pierre Rabes, PhD,^{2,3} Dominique P. Germain, MD, PhD.^{1,4} ¹ French Referral Center for Fabry disease, Division of Medical Genetics, Raymond Poincare Hospital, APHP Paris Saclay, France. ² Laboratory of Molecular Genetics, Ambroise Paré Hospital, APHP Paris Saclay, ³ Laboratory of Biochemistry, Raymond Poincaré Hospital, APHP Paris Saclay, ⁴ Division of Medical Genetics, University of Versailles, Montigny le Bretonneux

Introduction:

Fabry disease (FD) (OMIM #301500) is an X-linked genetic disorder of glycosphingolipid metabolism. Renal involvement is one of the major features of FD. Data on patients with FD and kidney transplant are scarce in the literature.

Methods:

Fifteen patients with classic FD (80% males) were treated in the French Referal Center for Fabry disease (www.centregeneo.com) for a mean post-transplant follow-up of 12.6 years (SD \pm 8.2). Mean age was 54.7 years (\pm 8.9). All patients were treated by enzyme replacement therapy (ERT).

Results:

Patient survival was 91.7% at 5 years and 82% at 10 years. Two patients died of cardiovascular causes and one from cancer. Graft survival was 93.4% at 5 years and 82% at 10 years. The mean glomerular filtration rate estimated by the CKD-EPI formula was 63.2 ml/min/1,73 m² (\pm 24.3), mean urinary protein to creatinine ratio was 0.28 g/g (\pm 0.16). Immunosuppressive treatment comprised tacrolimus (70%), cyclosporine A (20%), mycophenolate mofetil (64%), azathioprine (18%) and corticosteroids (50%). Mean duration of ERT post-transplantation was of 14.4 years (SD \pm 6,3).

All females who needed kidney transplant had unfavorable skewed X chromosome inactivation. Amenable mutations were present in 33% of patients. One patient switched to migalastat after 13 years of ERT.





Conclusion: Kidney transplant in association with continued ERT appears generally favorable in patients with FD with good patient and graft survival, stabilized renal function and absence of proteinuria.