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P209 -Is blood sugar control better in type 1 diabetes mellitus or type 2 diabetes mellitus post renal transplant?

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Introduction
More than 3.2 million people are affected by Diabetes Mellitus (DM) – 10% type 1 DM (T1DM), 90% type 2 DM (T2DM) in the UK to date. The majority of patients reaching end-stage kidney disease are on reducing amount of insulin to prevent hypoglycaemic episodes. Following renal transplant (RT) patients require increasing amounts of insulin as they begin to excrete insulin more effectively with improving renal function. Those with T2DM may be changed to more effective drugs as their disease is driven by insulin resistance in contrast to T1DM autoimmune destruction of beta-islet cells. We looked to determine whether blood sugar control using HbA1C post RT was better in T1DM compared with T2DM.

Methods: This observational retrospective study collected clinical and laboratory data from people with RT who had pre-existing DM from 2 separate centres. Available computer records were reviewed from 1/11/11-1/11/2017 and 1/07/2003-1/07/2018. Both centres used Basiliximab induction for RT with 1 centre using Campath in recent years. Triple maintenance immunosuppression: prednisolone, tacrolimus and mycophenolate mofetil was used in this cohort. Statistical tests were performed in Stata.

Results: A total of 46 patients with T1DM and 95 with T2DM received RT. T1DM:23 Female, 23 Male, T2DM:18 Female, 77 Male. Ethnicity in T1DM: 43 white, 1 black, 2 asian. T2DM: 62 white, 4 black, 24 asian, 1 other, 4 unknown. Median age at RT 65 years (range 34-82) T2DM, T1DM (range). PreRT HbA1C in T1DM 73mmol/mol (28-136), T2DM 52mmol/mol (27-100). Post RT HbA1C in T1DM 57mmol/mol (20-130), T2DM 58mmol/mol (23-116). HbA1C was significantly lower in both T1DM and T2DM post RT $p<0.01$ and $p<0.01$, respectively. There was a significantly higher level of HbA1C PreRT in T1DM compared with T2DM ($p<0.001$), however post RT there was no significant difference between the HbA1C levels achieved by patients with T1DM and T2DM. T1DM had a median glomerular filtration rate (GFR) 56mls/min/1.72m2 (17.3-103)and 3 failed RT. T2DM had a median GFR 49 mls/min/1.72m2 (17-181) and 7 failed RT. 66% T1DM and 65% T2DM achieved target HbA1C over median follow-up 2.5 years (3months- 5.9years).

Conclusion: People with T1DM have significantly higher HbA1C entering RT compared to T2DM. Both T1DM and T2DM patients achieve significant reduction in HbA1C following RT. Insulin doses were increased in T2DM but decreased in T1DM suggesting a need for guidelines post RT for T2DM management.