Posttransplant diabetes mellitus (PTDM) is a serious and common complication following solid organ transplant, generally occurring within the first 2–3 years after transplant. Despite efforts to prevent PTDM, it occurs in up to 10%-20% of nondiabetic kidney transplant (KTx) recipients and is associated with premature cardiovascular disease, graft loss, and mortality. KTx recipients have a 1.5-fold higher risk per decade of age of developing PTDM. Recent evidence from our team suggests that lower-intensity immunosuppression (Isx) regimens (eg, steroid-sparing) appear beneficial in older KTx recipients, reducing posttransplant death and graft loss.

We specifically evaluate the risk of PTDM among older KTx recipients using a unique data set linking clinical registry data and healthcare claims. We linked data from the Scientific Registry of Transplant Recipients (SRTR) and Medicare claims (2005-2016) to identify PTDM among KTx recipients without pretransplant diabetes. We used multivariate Cox regression to compare the incidence of PTDM by Isx regimen with the reference regimen Thymoglobulin (TMG) or Alemtuzumab (ALEM) with Tacrolimus[Tac]+mycophenolic acid[MPA]+prednisone[Pred] using inverse propensity weighting.

Among 40,108 KTx recipients, 12.7% developed PTDM, with higher incidences in older (≥55 years vs. <55 years: 16.7% vs. 10.1%) patients. The incidence of PTDM was lower with steroid avoidance [TMG/ALEM + No Pred (8.4%), and IL2rAb+ No Pred (9.7%)] than TMG/ALEM with triple therapy (13.1%). The beneficial impact of steroid avoidance using Tac on PTDM differed by patient risk and induction regimen. Steroid-free Isx is associated with a lower risk of PTDM. This benefit was confirmed for older adults. Risk of nonimmune complications should be considered along with rejection risk when considering Isx regimen choice in older KTx recipients.

The authors have nothing to disclose.