

Mycophenolate Mofetil And The Incidence Of Skin Cancer In Kidney Transplant Recipients;A Secondary Data Analysis

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Over the years there has been a shift in the use of anti-metabolites agents from azathioprine to mycophenolate mofetil (MMF) based immunosuppression, due to its better efficacy and less implication in the development of skin cancer compared to azathioprine. However, MMF is still potentially carcinogenic.

Secondary data of 941 Kidney Transplant Recipients (KTRs) who received kidney transplantation, from 1st January 1998 to 31st December 2018 were obtained. The incidence of skin cancer was determined in 429 KTRs immunosuppressed with MMF. Chi-square test of independence was used to determine the association between use of MMF based immunosuppression and the development of skin cancer, and to determine the risk factors associated with types of skin cancers developed.

MMF was associated more with the development of Basal cell Carcinoma (BCC) in both males and females 5(41.7%) Vs 5(50%) than Squamous Cell Carcinoma (SCC) 3(25%) Vs 2 (20%). Females had a higher incidence of skin cancer than males (10 (5.8%) Vs 12 (4.7%)) although this was not statistically significant (P=0.582). The BCC subtypes identified in females were nodular superficial and infiltrative BCCs, while males had mainly nodular BCCs. The SCC subtypes in females were moderately differentiated and well differentiated SCCs, while males had mainly moderately differentiated SCC. Being Caucasian and ≥ 50 years of age at transplantation were significantly associated with development of skin cancer (P=0.022 and P=0.005 respectively). Interestingly, Human Leucocyte Incompatible (HLA) transplants were not associated with development of skin cancer.

We conclude that The BCC and SCC histological subtypes associated with use of MMF were not the aggressive forms. KTRs on MMF based immunosuppression will benefit from regular skin assessments to ensure early detection of skin lesions and prompt treatment.