Tacrolimus

Acute kidney injury secondary to supra-therapeutic drug level: case report

In a prospective cohort study involving 281 paediatric kidney transplant patients had been tested for COVID-19 between 6 April 2020 and 3 September 2020 and who had been identified using a Research Electronic Data Capture (REDCap) data collection tool from the Improving Renal Outcomes Collaborative (IROC) registry across 22 centers in USA, one paediatric patient [sex and exact age not stated] was described, who developed acute kidney injury (AKI) secondary to supra-therapeutic tacrolimus level during immunosuppressive therapy with tacrolimus following a kidney transplant.

The patient, who underwent a kidney transplant, subsequently started receiving immunosuppressive therapy with tacrolimus [dosage and route not stated]. Eventually, the patient was found to be positive for COVID-19 [aetiology not stated], and was admitted to the hospital. The patient then developed AKI. Also, the patient's tacrolimus level was found to be a supra-therapeutic level. Thus, the patient's AKI was determined to be directly related to the patient's supra-therapeutic level of tacrolimus [duration of treatment to reaction onset not stated].

The patient's therapy with tacrolimus was therefore interrupted for 36 hours. The AKI of the patient was noted to be resolved prior to discharge from the hospital [not all outcomes stated].

Varnell C, et al. COVID-19 in pediatric kidney transplantation: The Improving Renal Outcomes Collaborative. American Journal of Transplantation 21: 2740-2748, No. 8, Aug 2021. Available from: URL: http://doi.org/10.1111/ajt.16501