

STRONG CHILDREN'S RESEARCH CENTER – Summer 2021

Incidence of Elevated Creatinine in Pediatric Inflammatory Bowel Disease Patients Treated with Infliximab

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Background

Renal complications in pediatric IBD patients are common, however, the etiologies of these complications are unclear. At our institution (GCH), there has been an increase in renal complications (X) with elevated creatinine.

The study was: 1) to see if IFX has a negative impact on renal function and 2) to see if pediatric IBD patients who are treated with IFX have an increase in renal function and whether this increase is sustained over time.

We studied 61 pediatric patients between the ages of 6 months to 18 years old between 2016 to 2021 and receiving IFX at Golisano Children's Hospital. Data collected from medical records included age, sex, BMI, diagnosis date, IBD type, mesalamine use, corticosteroid use, date of first IFX infusion, baseline serum creatinine, corresponding IFX level, and length of time on IFX. Patients were subdivided into 3 cohorts: No sCr Elevation, Transient sCr Elevation, and Sustained sCr Elevation. Within these sub-groups, transient vs. sustained sCr elevation was determined by comparing baseline Cr to subsequent Cr levels. Cystatin C was collected on a sub-group of patients referred to nephrology for elevated Cr levels. T- tests were used for continuous variables and chi-square for categorical variables.

Results of the analysis. Approximately 42% and 20% of the patients had a sCr of ≥ 0.2 and ≥ 0.3 respectively. In both cohorts, Cr levels were sustained in approximately one third having a sustained increase (>3 months). The study population was mostly male and this occurred, on average, a year after diagnosis. Use of immunomodulators, NSAIDs, and steroids had no significant impact on renal function.

Conclusion: 42% of pediatric IBD patients who were receiving IFX had a sCr of ≥ 0.2 during their time of treatment. In only one patient was there a sustained increase for over 3 months. Based on this, Infliximab

most likely is not associated with sustained Cr elevation, and transient elevations may be expected during their treatment course. Patients who have a sustained increase for over 3 months, may then warrant referral to Pediatric Nephrology for further investigation. These findings may be reassuring to clinicians who are prescribing IFX to IBD patients to induce and maintain remission.