# ABSTRACT

**Background:**

Acute kidney injury (AKI) is a common and serious complication in critically ill patients with high mortality rate.

**Aim:**

To evaluate the prognostic value of RIFLE criteria in acute kidney injury in intensive care unit,and its correlation with older severity scores as APACHE II , SAPS II , SOFA scores.

**Methods:**

We prospectively applied the RIFLE criteria to 50 patients who developed AKI on ICU admission and followed them all through their in hospital stay.

**RESULTS:**

20 of the patients were females (40%) and 30 males (60%). The age of the patients ranged from 18 years to 80 years (mean 48.3±18.0).

Sepsis was found to be the most common cause (30%) of AKI (p value =0.008), the mean length of hospital stay was found to be significantly higher in failure patients compared to injury and risk patients (25 ±15, 19.4±5.5, 3.9±2.1 consequently P value= 0.000). Patients who needed dialysis showed statistically significant higher mortality (36% versus 0%, p= 0.000). Increased RIFLE criteria stage was accompanied by increased mortality, Failure (50%), Injury (25%) and Risk (20%) mortality consequently, (p=0.011). RIFLE criteria showed a strong correlation with APACHE II (P= 0.029), SOFA (P= 0.045), SAPS II scores (p value= 0.015).

Also Acute Kidney International Network was found to predict patient outcome the same as RIFLE criteria (p=0.008 vs. p= 0.011).

**CONCLUSION:**

The introduction of the RIFLE criteria have a good predictive value for short and long term outcome and mortality in critically ill patient.

**Keywords:**

Acute kidney injury, RIFLE criteria, intensive care unit.