**ROLE OF BLOOD UREA NITROGEN TO CREATININE RATIO IN THE PREDICTION OF INTRAVASCULAR VOLUME STATUS IN PATIENTS WITH SYSTOLIC HEART FAILURE**

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Objective: We investigated the correlation between invasive hemodynamic assessment of intravascular volume status and blood urea nitrogen (BUN) and serum creatinine (Scr) ratio.

Background: Blood urea nitrogen (BUN) to serum creatinine (Scr) ratio is frequently used to evaluate intravascular volume status, especially in patients who are treated with diuretics.

Methods: We reviewed data from all patients who underwent right heart catheterization (RHC) at our center from 2009 to 2011.We obtained BUN to Scr ratio collected within 24 hour from the RHC. A total of 308 patients were included in the analysis. A total of 123 patients had BUN/Cr ratio > 20. These patients were divided into 2 groups, first group (77 patients) with preserved left ventricular ejection fraction (LVEF >50%) and the second group (46 patients) with reduced LV systolic function (LVEF <50%). Pulmonary capillary wedge pressure (PCWP) values were obtained in all patients and were compared to the BUN/Cr ratio that was performed within 24 hours of the RHC. The average PCWP was 16 mmHg in the first group with normal LVEF and 23 mmHg in the group with depressed LVEF. The difference was statistically significant with a P<0.0001 using the T-test.

Conclusion: BUN to Scr ratio does not correlate with intravascular volume status in patients with depressed left ventricular systolic function and diuretics therapy in patients with symptomatic heart failure should not be based on this ratio.