

**IS SPOT URINARY PROTEIN/CREATININE RATIO A
RELIABLE ESTIMATOR OF 24-HOUR PROTEINURIA IN
PATIENTS WITH MULTIPLE MYELOMA AND
AMYLOIDOSIS?**

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This retrospective study was conducted to determine whether a spot urine protein/creatinine ratio (UPr/UCr) provides accurate quantitation of 24-hr urinary protein excretion (24-hr Prot) in patients with Multiple myeloma and amyloidosis.

Total of 49 patients who were admitted for multiple myeloma or amyloidosis was assessed by 24 hour total protein excretion and spot UPr/UCr. We conducted T-tests and correlation studies in these patients with varied creatinine clearances (calculated by Cockcroft and Gault equation).

Average serum creatinine was 1.3 ± 1.125 , (0.46-6.7), spot UPr/UCr measured 1.49 ± 2.7 , and quantified twenty four hour protein measured 1.07 ± 2.08 . Mean creatinine clearance was 56.9 ± 31.6 . There is a strong association of hyponatremia with proteinuria ($p < 0.001$), UPr/UCr ($p = 0.04$) hypocalcemia (0.003), and 24 hr urine protein ($p = 0.009$). There was a strong correlation between 24 hour total protein content in the urine and UPr/UCr with a correlation coefficient of 0.81 ($p < 0.001$) and was independent of creatinine clearance.

Creatinine clearance or 24 hour urine creatinine does not influence amount of proteinuria in patients with multiple myeloma or amyloidosis. Our study supports the recommendation of using spot UPr/UCr in screening and monitoring proteinuria in patients with Multiple Myeloma. However, in assessing the exact amount of proteinuria, the urine UPr/UCr may slightly overestimate the proteinuria.