

ESTIMATION OF THE GLOMERULAR FILTRATION RATE IN PATIENTS WITH GLOMERULAR PATHOLOGY COMPARING CKD-EPI Y MDRD-4 FORMULAS

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More than 40 formulas have been developed to estimate the glomerular filtration rate (GFR) involving creatinine concentration (Cr) as well as demographic and anthropometric variables. Modification of Diet in Renal Disease (MDRD-4) is the most recommended one. However, several studies state that Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation improves the results obtained with MDRD-4. Our aim was to compare the results of the estimated GFR (eGFR) obtained with both formulas in patients with glomerular pathology. We studied 32 individuals with glomerulopathies, age (mean±SD): 34±8 years old, 24 females (F) and 8 males (M). Cr was assessed by an automated method. Results were expressed as mean±SD. eGFR (ml/min) with CKD-EPI and MDRD-4 were 102±41 and 105±51 respectively; no significant differences were obtained between both formulas ($p>0.05$). Correlation coefficient between both equations was highly significant ($r=0.93$; $p<0.0001$). eGFR values were compared by sex and age. Results obtained for CKD-EPI and MDRD-4 by sex were: F: 107±38 and 111±51; M: 85±47 and 86±48, respectively. Results obtained for CKD-EPI and MDRD-4 by age were: < 34 years old: 109±41 and 111±55; ≥ 34 years old: 93±40 and 96±46, respectively. No significant differences were obtained for sex nor age ($p>0.05$). We conclude that both formulas could be used indistinctly as estimators of GFR in patients with glomerular pathology. For GFR values > normal values, eGFR with both equations would tend to a poorer correlation, then stratification and comparison of these values with those obtained from Cr clearance are suggested in order to determine which equation would be the best analytical predictor in patients with glomerulopathy and glomerular hyperfiltration.