

عنوان مقاله:

Glomerular Filtration Rate Estimation Based on Cystatin C Formulas among Neonates

محل انتشار:

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خلاصه مقاله:

Background: Glomerular filtration rate (GFR) is the best indicator to assess renal function; however, it is difficult to perform it, especially in neonates. Serum creatinine is the most commonly used marker of GFR; nevertheless, it has some limitations since it can be affected by factors other than renal function. Cystatin C, another endogenous marker used to estimate GFR, is not affected by non-renal factors. The results of some studies suggest that serum cystatin C levels are more accurate tests of kidney function than serum creatinine levels. This study aimed to estimate GFR with cystatin C-based formulas among neonates and determine the correlations between these methods and the Schwartz formula. Methods: The population of this research consisted of 99 neonates whose serum creatinine and cystatin C levels were measured concurrently. Moreover, the glomerular filtration rate was estimated using the Schwartz formula and IF cystatin C-based formulas separately. Results: Based on the findings, all GFR values based on cystatin C formulas correlated significantly with each other (p < ... a); however, with one exception, none of these values correlated with Schwartz GFR (P>...a). The only cystatin C formula that yielded values correlating with the Schwartz formula was CysCrEq, which used serum cystatin C and creatinine concomitantly. Conclusion: It can be concluded that since all GFR values based on cystatin C correlated significantly and cystatin Cwasindependent of non-renal factors, cystatin C reflected the real GFR more accurately than serum creatinine. Nonetheless, further studies with .gold standard techniques are required to verify the usefulness of cystatin C-based formulas

كلمات كليدى:

Creatinine, glomerular filtration rate, Neonates, Schwartz formula

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