

Clinical versus laboratory for estimating of dehydration severity

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ABSTRACT

Background: Acute gastroenteritis is a common cause of dehydration and precise estimation of dehydration is a vital matter for clinical decisions. We try to find how much clinically diagnosed scales are compatible with laboratory tests measures. **Materials and Methods:** During 2 years 95 infants and children aged between 2 and 108 months entered to emergency room with acute gastroenteritis. They were categorized as mild, moderate and severe dehydration, their recorded laboratory tests include blood urea nitrogen (BUN), creatinine, venous blood gases values were expressed by means $\pm 95\%$ of confidence interval and compared by mann-whitney test in each groups with SPSS 16, sensitivity, specificity and likelihood ratio measured for defined cut off values in severe dehydration group, *P* value less than 0.05 was significant. **Result:** Severe dehydration includes 3% of all hospitalization due to dehydration. Laboratory tests cannot differentiate mild to moderate dehydration definitly but this difference is significant between severe to mild and severe to moderate dehydration. **Conclusion:** Routine laboratory test are not generally helpful for dehydration severity estimation but they can be discriminate severe from mild or moderate dehydration exclusively. Creatinine higher than 0.9 mg/dl and Base deficit beyond-16 are specific (90%) for severe dehydration estimation in infant and children.

Key words: Acute gastroenteritis, children, dehydration, laboratory tests

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