

عنوان مقاله:

Diagnostic Value of Urinary Neutrophil Gelatinase-Associated Lipocalin (NGAL) in Detection of Pediatric Acute Kidney Injury; a Systematic Review and Meta-Analysis

محل انتشار:

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خلاصه مقاله:

Background: Two questions about diagnostic value of urinary neutrophil gelatin associated lipocalin (uNGAL) in detection of acute kidney injury (AKI) in children have remained unanswered; first, which cut-off point of uNGAL has the highest value in detection of AKI; and second when is the best time for measuring this biomarker in a patient. Accordingly, the present study aimed to conduct a systematic review and meta-analysis to provide evidence on the diagnostic and prognostic value of uNGAL in detection of AKI in children. **Materials and Methods:** An extensive search in the electronic databases up to the end of August 2016 was performed. Data were summarized and then the diagnostic performance characteristics of uNGAL in AKI were evaluated. **Results :** Data from 37 articles were summarized. Analyses based on area under the curve, sensitivity, specificity and diagnostic odds ratio revealed that uNGAL provides the optimum prognostic and diagnostic value in detection of AKI in children when measured during 0 to 6 hours after admission or surgery with a cut-off point of 50 mg/dL. In this setting, area under the curve, sensitivity, specificity and diagnostic odds ratio of uNGAL are 0.97 (95% CI: 0.95 to 0.98), 0.92 (95% CI: 0.84 to 0.97), 0.92 (95% CI: 0.83 to 0.97) and 148.14 (95% CI: 32.13 to 683.10), respectively. **Conclusion:** Based on these results, measuring uNGAL during the first 6 hours after admission or surgery with a cut-off point of 50 mg/dL, provides the optimum diagnostic value in detection of AKI in children.

کلمات کلیدی:

(Acute kidney injury, Biomarker, Pediatrics, Urinary Neutrophil Gelatinase Associated Lipocalin (uNGAL

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