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50 Years Ago in *The Journal of Pediatrics*

Diagnosing the Etiology of Childhood Diarrhea by Clinical Features: An Update

Nelson JD, Haltalin KC. Accuracy of diagnosis of bacterial diarrheal disease by clinical features. J Pediatr 1971;78:519-22.

Diarrhea continues to be a preventable cause of childhood morbidity and mortality. An accurate assessment and identification of the potential pathogen is required for appropriate management and prevention of mortality. Fifty years ago, Nelson et al studied the consistency of clinical features of diarrhea in determining the probable etiology so as to dictate the need for culture or prescribing antibiotics. They concluded that correct assessment can be made on the basis of history and examination with approximately 70% reliability.

Over the last 2 decades, the global incidence of diarrheal episodes among children younger than 5 years has declined and the number of deaths reduced by 60%.[1] However, diarrheal disease still remains the second-leading cause of mortality among children younger than 5 years and the leading cause of malnutrition. It is crucial to determine the underlying pathogen accurately and timely for adequate treatment and prevention of deaths. Available conventional diagnostic methods include stool culture, microscopy, and antigen-based modalities, but these are time-consuming, less sensitive, and are not available for all relevant pathogens. Stool culture reports are available after 48-72 hours of sample collection, and by this time, the diarrheal episode is already improved, with or without any specific antimicrobial therapy. Moreover, an etiological agent cannot be identified in 40% cases of diarrhea.[2] A good history and detailed physical examination remain the key foundation in the diagnostic evaluation of diarrhea. Low-grade fever and acute, watery, non-bloody diarrhea typically indicate viral pathogen, whereas high-grade fever (>104°F) indicates severe bacterial etiology. Nucleic acid amplification from stool samples can offer rapid diagnosis, but it is expensive and requires sophisticated equipment. Specific diagnostic evaluation is currently not recommended routinely in all cases of diarrhea in children. Diagnostic effort is warranted only in cases of outbreaks, bloody diarrhea, and in children with underlying chronic diseases and immunodeficient states. Hence, accurate clinical assessment by the treating physician still remains the mainstay for management decisions.

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