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Atypical Urinary Tract Infection in a Febrile Child: A Missed Opportunity for Early POCUS Detection of UVJ Obstruction

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INTRODUCTION

Urinary tract infections (UTIs) in children may be the first manifestation of underlying structural abnormalities, such as ureterovesical junction obstruction (UVJO). Delayed diagnosis may lead to complications such as pyonephrosis or renal scarring. Point-of-care ultrasound (POCUS) offers a rapid bedside tool to detect hydronephrosis early, especially in emergency settings.

CASE DESCRIPTION

A 16-month-old boy presented with a one-week history of fever, vomiting, and diarrhoea. Initial examination and labs suggested infective acute gastroenteritis with UTI. Despite resolution of gastrointestinal symptoms and IV antibiotics, the child had persistent fever, leukocytosis, and elevated CRP. A renal ultrasound later revealed severe left urinary tract dilatation and pyonephrosis. Intraoperatively, UVJ obstruction was confirmed, and ureterostomy performed. The patient showed clinical improvement and is awaiting ureteric reimplantation.

DISCUSSION

This case highlights the diagnostic challenge of atypical UTI presentations. Earlier use of POCUS during the ED visit could have prompted earlier identification of hydronephrosis and timely urologic referral. Emergency physicians should consider POCUS in febrile children with persistent symptoms or abnormal urine findings, even when initial diagnoses such as AGE seem likely.

CONCLUSION

POCUS is a valuable adjunct in the early evaluation of pediatric UTI, especially for detecting underlying structural pathology such as UVJO. Its routine integration into ED protocols may improve diagnostic accuracy and outcomes in children presenting with atypical or prolonged febrile illnesses.

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