

ABSTRACT

Neutropaenia and immunosuppression place children on treatment for malignancies at a high risk for infections. We undertook to determine the prevalence of urinary tract infection (UTI) in children on treatment for cancer at the Kenyatta National Teaching and Referral hospital. With the understanding that many laboratories in the rural areas of the country lack appropriate facilities for confirmation of UTI, it was also important to evaluate simple and inexpensive screening methods against a "gold standard" in this cross sectional study. One hundred and eighty six children between the ages of five and 14 years admitted in Kenyatta hospital with leukaemia or lymphoma were enrolled. Besides clinical evaluation, urinalysis and culture and sensitivity were performed on all the subjects. Urine culture was considered the "gold standard" for diagnosis for UTI. The prevalence of UTI was 8.1% (CI = 6.1, 10.1). Only five out of 15 patients were symptomatic. *E. coli* and *klebsiella* spp. were responsible for 93.4% of the infections. Presence of pyuria, defined as five or more pus cells per high power field, had a sensitivity of 80.0%, specificity of 97.1% and a positive predictive value of 70.6% while comparative values associated with a positive nitrite test were 60%, 97.7% and 96%. Other clinical and laboratory tests had low sensitivity. UTI is a relatively frequent infection in children on cancer treatment. Screening for pyuria is simple, inexpensive and an accurate method of diagnosing UTI in children on treatment for lymphohaematopoietic malignancies in situations where facilities for urine culture are unavailable.