

OP 10 Validity of urine microscopy, nitrite and leucocyte esterase tests by urine dipsticks in diagnosis of urinary tract infection among the patients admitted in Teaching Hospital, Jaffna.

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INTRODUCTION: Urinary Tract Infection (UTI) is more common in women, elders and children. Particularly in females; UTI in pediatrics leads to severe loss of function and scarring of renal tissue. Numbers of screening tests are available to screen urinary tract infection, such as urine sediment microscopy (pyuria), urine dipstick analysis and Gram staining. In urine sediment microscopy presence of pus cells >5/HPF and presence of bacteria in excess of 10^4 /ml urine is suggestive of UTI.

OBJECTIVES: To determine the validity of the nitrite, leukocyte esterase, and a combination of both tests with microscopic pyuria and urine culture as a gold standard in patients with clinically suspected UTI admitted in Medical and pediatric wards, Teaching hospital, Jaffna.

METHODS: Urine samples were obtained from 116 patients admitted in medical and pediatric wards, Teaching Hospital, Jaffna from 18th February to 21st March 2013. Validity of nitrate & leukocyte esterase was analyzed by three different dip sticks named A, B and C and compared with urine culture.

RESULTS: This study reveals that the Nitrite test, urine dip sticks A, B showed high specificity (85.88%, 85.71) however C had low specificity (69.15%), but all three urine dipsticks had lower sensitivity (45.16%, 46.87% and 58.33 respectively). Leukocyte esterase tests of all three urine dipsticks showed high sensitivity (81.25%, 81.25% and 84.37%) and the specificity of 60.71%, 60.71 and 60.71. Combination of microscopic pyuria and Nitrite (or) Leukocyte esterase of all three urine dipsticks were shown moderate sensitivity and specificity.

CONCLUSION: The entire rapid test can detect most of the patients admitted to medical and pediatric wards with UTI. The specificity of all three urine dipsticks was reasonably higher than sensitivity for detecting UTI. *Escherichia coli* (40.62%) are the primary bacterial pathogen followed by *Pseudomonas sp* (21.87%) caused UTIs in patients admitted in Medical and Pediatric wards, Teaching Hospital of Jaffna.