



## Bacterial Urinary Tract Infection as Public Health Hazard among children in Basrah, Iraq

Hanadi A. Jasim<sup>1</sup>, Wijdan Nazar Ibraheim<sup>1</sup>, Mukhalad Bassim Ibraheem<sup>1</sup>, Mohammed Raheem Shakir<sup>1</sup>, Ghaith Eddin AbdAljaleel<sup>1</sup>, Basil Abdulzahra Abbas<sup>2</sup>

<sup>1</sup>College of Medicine, University of Basrah, Basrah, Iraq

<sup>2</sup>Colleges of Veterinary Medicine, University of Basrah, Basrah, Iraq

\*Corresponding author: Hanadi A. Jasim, College of Medicine, University of Basrah, Basrah, Iraq, Email: Hanadi.jasim@uobasrah.edu.iq

Submitted: 17 January 2023; Accepted: 18 February 2023; Published: 11 March 2023

### ABSTRACT

Urinary tract infection (UTI) is one of the commonest bacterial infections seen by Pediatricians in children. However, diagnosis remains a difficult task probably because its presentation is non-specific and similar to other common illnesses. This study aims to isolate, identify and characterize urinary tract infection causing bacteria and to assess the incidence of UTI among various patients based on age, sex, and another socioeconomic status. Urine samples (N=80) of children below 10 years of age that were suspected of urinary tract infection were sent for routine microscopic examination (GUE). Then urine samples were cultured on different culture media for microbiological investigation. Out of 80 Children who enrolled in this study, 17(42.55%) were male and 23(57.5%) were female. The majority of children in this study were feverish (fever >38°C) (62.5%) and the others had dysuria, frequency, and flank pain (52.5, 45, 40%) respectively. Gram-negative bacteria were the most common uropathogens responsible for UTI in comparison to Gram-positive bacteria. *E. coli* was the common uropathogen from Gram-negative bacteria followed by *Klebsiella* and *Pseudomonas* (44%, 12%, 4%) respectively, *Staphylococcus aureus* also appeared in high percent than other Gram-positive bacteria. In Conclusion, during the period of this study, *E. coli* is the most commonest uropathogen in children with UTI.

**Keywords:** *Common, Suspected, Culture, Bacteria.*

### INTRODUCTION

Urinary tract infections (UTIs) in children are commonly seen in the emergency department and pose several challenges to establishing the proper diagnosis and determining management (Bhat et al 2011). UTI may be classed as either an upper UTI – if it's a kidney infection or an infection of the ureters, the tubes connecting the kidneys to the bladder or a lower UTI – if it's a bladder infection (cystitis) or an infection

of the urethra, the tube that carries urine from the bladder out of the body.

Bacteria frequently invade the distal urinary tract but, in most individuals, infection is not established, due to an efficient antibacterial host defense (Nielubowicz, Mobley 2010). However, in patients with voiding dysfunction, malformations, and or molecular immune defects, infection is facilitated, and even bacteria of reduced virulence may establish infection (Ragnars et al 2011).