UTILITY OF URINE BAG COLLECTION METHOD IN THE DIAGNOSIS OF URINARY TRACT INFECTION AMONG CHILDREN 2-24 MONTHS OLD IN A TERTIARY HOSPITAL IN DAVAO CITY: A RETROSPECTIVE STUDY

Objective: To determine the utility of urine bag collection method in the diagnosis of Urinary Tract Infection

Design: Retrospective

Setting: Tertiary hospital in Davao City

Patients/ Participants: A total of 143 respondents who met the inclusion criteria were included in the study.

Main Outcome Measure(s): Patients with pure culture (>100,000 cfu/ml) or otherwise

Results: A total of 143 patients qualified in the inclusion criteria were included in the study from January 2016-December 2020. There were 74 (48.25%) male and 69 (51.75%) female. The median age was 9±3.0 and 38.75±.90 for the temperature. Out of 143 who met the criteria, there were 65 (45.45%) patients recorded with single pathogen and with more than 100,000 CFU while there were 38 with less than 100,000 CFU, both with single and mixed pathogen and some were recorded with no growth in their urine culture. Highest pathogen isolated was *Escherichia* coli with 43 (40.0%) of the cases, followed by *Proteus maribilis* with 10 (15.38%) of the cases and *Kleibsella spp.* (7.69%) with *ozanae* as one of the identified species. Other pathogens identified include *Staphylococcus spp.* specifically *epidermidis* (1.54%) and *haemolyticus* (1.54%). Other pathogen such as *Enterococcus* species (3.07%) were also isolated. Pseudomonas Inferential analysis showed that age, sex, and temperature were not significantly associated (χ^2=1.032; p=.597; χ^2=2.554; p=.279; χ^2=.363; p=.834) with UTI diagnosis.

Conclusions: Without established clear-cut off threshold for significant utility for urine bag method, few studies compared the clean-catch technique using the sterile urine bag with other methods. The study yielded the percentage utility of the Urine Bag Collection method of 45.45 where *E. coli* was the predominant cause of UTI, other species of both gram positive and negative bacteria were also isolated from the samples. In reference to the previous study results, this current data supports the claim, that the promise of clean catch technique using a sterile urine bag in diagnosing UTI for children 2-24 months old slightly becomes clearer towards pediatric health acceptance and its prevalence is not dictated by age, sex and temperature.

Keywords: *Urinary Tract Infection, Urine Bag Collection Method, Clinical Utility*