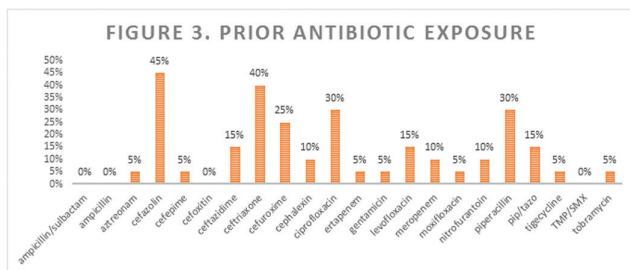
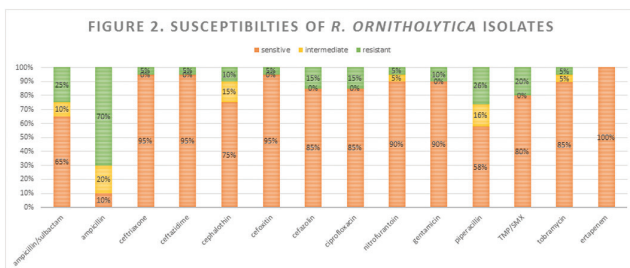
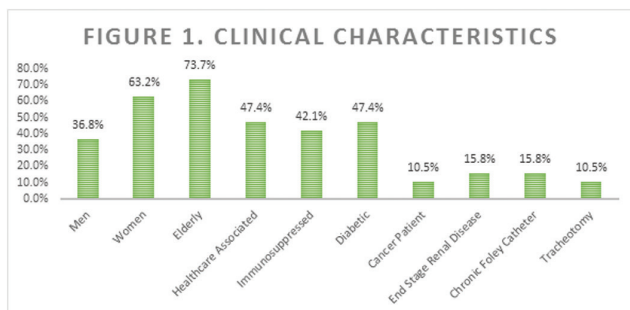


Methods. Cultures positive for *R. ornitholytica* were identified through DRMC's electronic medical records (EMR) from 1/2010 to 3/2017. Site of infection, concurrent infections, isolate susceptibilities, prior antibiotic exposure, and appropriateness of treatment were extracted from the EMR. *Healthcare associated* was defined as occurring in the hospital, nursing home, long-term acute care, or inpatient rehabilitation facility within the past 90 days. Those with diabetes, cancer, and end stage renal disease (ESRD) were qualified as immunosuppressed.

Results. Thirty-two cases were isolated, of which 20 had associated clinical data. One urine isolate was consistent with colonization. Of the 19 infections, the majority ($n = 15$) were urinary tract infections (UTIs) and one case each from bronchial washing, heel wound, blood culture, and vulvar lesion. Clinical demographics are shown in Figure 1. Thirteen (65%) had concurrent infections, of which 5 (26%) were co-infected with *Enterococcus faecalis*, one which was vancomycin resistant. Three had chronic Foley catheters, constituting 20% of the UTIs. Susceptibilities are reported in Figure 2. Prior antibiotic use is shown in Figure 3.

Conclusion. Most of the isolates from our institution were relatively sensitive, with most resistance to ampicillin. Two isolates were pansensitive, however one case was sensitive only to nitrofurantoin and ertapenem. All isolates which were resistant to cefazolin and ceftriaxone had prior exposure. The elderly and diabetics had the greatest association with infection. A majority of patients had a concurrent infection, which may suggest this as an opportunistic organism. Our findings warrant further studies to better characterize clinical associations and development of resistance in response to prior antibiotic exposure.



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1145. Are Urinalyses Used Inappropriately in the Diagnosis of Urinary Tract Infections?

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Background. One of the most readily available and cost effective tests in the diagnosis of urinary tract infections (UTI) is the urinalysis. Problems arise when antibiotic treatment is initiated in a patient who does not display typical signs and symptoms of UTI and for whom a urinalysis was obtained for other reasons.

Methods. This was a retrospective observational study carried out on 1000 patients with positive urine nitrite. Medical records were identified with subsequent analysis of urine culture and symptomatology. Recorded and analyzed data included: age, sex, location (emergency room (ER) or hospital ward), findings on urinalysis (pH, presence of leukocyte esterase(LE), epithelial cells, bacteria, and white blood cells (WBCs)) and antibiotic treatment.

Results. Of these 1000 patients with positive nitrite, we excluded 815 patients (81 had missing data, 466 met exclusion criteria and 268 had symptomatic UTI). 185 were found to not have any symptoms of a UTI. Inappropriate antibiotic treatment occurred in 108/185 patients (58.4%) and was significantly associated with greater amounts of bacteria and WBCs in the urinalyses ($P = 0.008$ and $P = 0.029$, respectively). It was also significantly more likely to occur in the ER than the hospital wards (92/147 treated in the ER vs. 16/37 treated on the hospital wards, $P = 0.033$). There was no significant association between antibiotic treatment and age, sex, urine pH, urine LE, and urine epithelial cell amounts ($P > 0.05$). Urine cultures were not obtained in 69.7% of patients. A positive urine culture was significantly associated with inappropriate antibiotic treatment ($P = 0.0006$). The two most common presenting complaints were psychiatric complaints (21.6%) and vaginal bleeding (14.6%).

Conclusion. Urinalysis can be an invaluable diagnostic tool, but must be used and interpreted appropriately. There is a misperception that pyuria with bacteriuria defines UTI. However, positive results on a urinalysis alone in an asymptomatic patient is not enough to diagnose a UTI, and antibiotic treatment is only indicated in specific circumstances as outlined by IDSA guidelines for the treatment of asymptomatic bacteriuria. Further education targeting appropriate interpretation of urinalyses and IDSA guidelines is needed to decrease the unnecessary use of antibiotics.

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1146. Antibiotic Prescription Practice for Pediatric Urinary Tract Infection in a Tertiary Center

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Background. Urinary tract infection (UTI) is a leading cause for acute care visits in pediatrics. A suspected UTI diagnosis is made based on typical clinical presentation and pyuria and confirmed by significant growth in an appropriate urine sample. Prescribing antibiotics for suspected UTI is a common practice, and may lead to unnecessary antibiotic exposure. We aimed to review the practice of UTI diagnosis and management in the Emergency Department (ED) to identify targets to improve antimicrobial prescribing practices.

Methods. Children (< 18 years) who were discharged from the ED at the Hospital for Sick Children with a diagnosis of UTI between October to December 2016 were included. Patients were excluded if they were (1) under 12 weeks of age, (2) had underlying genitourinary abnormalities, (3) were admitted or transferred to another center, (4) were on antibiotics on presentation, (5) had urine testing done in another laboratory, or (6) were given conditional prescription. Demographic, clinical history, laboratory findings, and urine culture results were collected from patient charts. The sensitivity and specificity of nitrite and leukocyte esterase (LE) for UTI diagnosis were calculated. Logistic regression was used to examine the relationship between urinalysis characteristics and confirmed UTI.

Results. A total of 186 children with a median age of 4.2 (IQR 1.2, 7.3) were included; 82.3% were female. Almost all children were discharged home on antibiotics ($n = 183$, 98%) for a median duration of 7 days (IQR 7, 10). A total of 87 patients (46.8%) received antibiotics despite negative urine cultures and none of these patients received notification to stop. This led to 652 unnecessary antibiotic days. The presence of nitrites was the strongest predictor of UTI (OR 13.3, $P < 0.001$) and was highly specific. An LE result of 2+ (OR 2.4, $P = 0.04$) or 3+ (OR 2.23, $P = 0.016$) was also predictive of UTI.

Conclusion. Current practice in managing suspected pediatric UTIs in our ED resulted in significant and unnecessary antibiotic exposure. We identified targets to reduce unnecessary antibiotic exposure including improving the diagnostic accuracy of UTIs, a process to discontinue antibiotics for negative cultures and standardizing antimicrobial duration.

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1147. Comparison of Inflammatory Markers Between Adult and Pediatric Brucellosis Patients

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