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DOES AN ENHANCED URINE CULTURE ALTER THE OUTCOME IN FEMALE PATIENTS WITH RECURRENT URINARY TRACT INFECTIONS? - THE SWANSEA EXPERIENCE

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Introduction:

Urinary tract infections (UTIs) are common and with significant associated costs (1, 2). Acute UTIs affect up to 50% of women, with 30% experiencing recurrent episodes (3-5). Confirming UTI typically requires a 10^5 CFU/ml threshold of a single uropathogen (6). However, Stamm et al. (1982) suggested a lower threshold of 10^2 CFU/ml for patients with acute symptoms (7). This audit assesses the impact of using the lower threshold on recurrent UTI outcomes.

Methods:

A service evaluation retrospective audit at a tertiary hospital in August 2023 between February 2020 and August 2023. Patients with dysuria and frequency with negative standard culture of urine were enrolled to have an extended culture of urine. Patients completed the numeric rating scale for pain (1-10) and bladder and sexual function bothersome scores (0-3) pre- and post-antibiotic treatment, based on the extended urine culture. Patients were followed up at 2 weeks, 3 months, 6 months, and 9 months.

Results:

Twenty patients initially enrolled, but two were lost to follow-up. Of the 18 remaining, 16 underwent enhanced urine culture; Among the positive cultures (16/18), the predominant pathogens were E. coli (10), enterococcus (3), and (3) Klebsiella pneumonia, SCOA neg, Strep B, CKOS. They were treated as per the antibiotic sensitivity patterns leading to 69% of them reporting improvement (symptom free) and 25% reporting significantly improved symptoms (minimal pain)

Pre-treatment, the mean NRS pain scale was 8.3, which decreased to 1.2 post-treatment. Pre-treatment, the mean Queensland bladder function bothersome score was 2.9, decreasing to 1.3 post-treatment. Pre-treatment, the mean Queensland sexual function bothersome score was 1.6, decreasing to 1.1 post-treatment.

Conclusion:

After enhanced culture, a uropathogen was isolated in 89% of patients who had a negative standard urine culture.

This audit demonstrates the importance of extended culture of urine in management of recurrent UTI.

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