

Session: EV023 Pharmacoepidemiology, improved prescribing and antibiotic stewardship

Category: 5d. Pharmacoepidemiology, improved prescribing and antibiotic stewardship

22 April 2017, 08:45 - 15:30
EV0402

Appropriateness of diagnosis and treatment of urinary tract infection (UTI) in older adults: Are we over treating?

Jaya Makker¹, Juliana Graciani Moura^{*2}, Tejal Vaghela³, Angela Kwan¹, Hala Kandil⁴

¹*West Hertfordshire Hospitals NHS Trust*

²*NHS*

³*Watford General Hospital; Pharmacy*

⁴*West Hertfordshire Hospitals NHS Trust; Microbiology*

Background: The rise in antimicrobial resistance is a global threat to treatment and prevention of infections. Appropriate use of antibiotics is crucial to reduce the rates of antimicrobial resistance. Previous studies have demonstrated 40–75% of antimicrobial use is inappropriate, particularly in the healthcare setting (Zahar et al., 2006). UTI is the most common indication for antibiotic prescriptions in older adults. Diagnosis of UTI in older adults remains a significant dilemma for clinicians. The aim of our study is to assess the appropriateness of diagnosis and antibiotic treatment in older patients with suspected urinary tract infection

Material/methods: Inpatients aged > 65 years old who started antibiotics for suspected UTI between 7th October & 7th November 2016, in a large district Hospital were included in this study. Data was collected retrospectively from electronic records, medical notes and drug charts. Admission symptoms, urine sample details, prescribed antibiotics and catheter related information was collected and analysed. Appropriateness of the use of diagnostic tools (dipstick test and urine culture) was assessed against relevant guidelines (NICE QS90 & Scottish Intercollegiate Guidelines Network –SIGN 2012). Appropriateness of antibiotic treatment was assessed against the local trust guidelines.

Results: 37 patients were eligible for the study. Twenty-one were females and 16 were males. Age ranged from 72 to 96 years old. Ten patients were catheterised. Urine dipstick test was performed on all patients including asymptomatic and catheterised patients. Eight patients (26.9%) met the clinical criteria for diagnosis of UTI and the diagnostic algorithm was appropriately followed. The diagnosis of UTI in 3 patients was confirmed microbiologically. Diagnostic algorithm was inappropriately followed on 78.37% of patients who were either asymptomatic (35.1%, 46% presented with fall) or had one symptom (43%, 75% fever or confusion). Third of catheterised patients did not have their catheter changed despite being treated for presumed UTI. Overall, 7 patients had significant bacteruria and pyuria (3 were symptomatic); and 7 had sterile pyuria or mixed bacterial growth (3 were symptomatic).

All patients received antibiotic therapy irrespective of the presence of symptoms or the result of urine dipstick test and culture. Patients who met both the clinical and microbiological criteria for UTI were prescribed broad spectrum antibiotic; and for inappropriate duration in 50% of the cases. Overall, assuming that antibiotic is indicated, the choice of antibiotic was inappropriate in 70 % and the duration was not adequate in 62% of patients.

Conclusions: Our study showed an overall high rate of inappropriate use of antibiotics. This is likely to be related to inappropriate testing and diagnosis of urinary tract infection. Guideline of treatment of UTI in older adults exists but the clinical diagnostic dilemma of defining UTI and identifying which patients to treat with antibiotics persists.