Introduction

Uncomplicated lower urinary tract infection (UTI), also known as cystitis, is mainly characterised by a triad of dysuria, pollakiuria and urgency: with the absence of fever and flank pain. Patients may also present with suprapubic tenderness, or possibly haematuria. Urinary Tract Infections affect up to 15% of women each year. During their lifetime, >30% of women will experience a UTI.

The gold standard for the diagnosis of urinary tract infection is the detection of a pathogen by urine culture in the presence of clinical symptoms. However, urine dip sticks are the most regularly used tools to aid diagnosis and are a reliable investigation for diagnosing UTI in the presence of clinical symptoms.

This audit is based on local Trafford CCG Antibiotic Guidelines, which recommend the use of Trimethoprim or Nitrofurantoin first line, and Cefalexin or Pivmecillinam second line for treatment of uncomplicated UTI.

The Cost of Antibiotic Resistance

The consumption of antibiotics is understood to be a major driver in the development of resistant organisms, consequently affecting patient morbidity and mortality. However, antibiotic prescribing has increased in England year on year, with the majority of antibiotic prescribing taking place in primary care. Only infections of the respiratory tract have a higher antibiotic prescribing rate than UTIs, and recently there has been an increase in antibiotic resistance.

A recent review established that additional cost of resistance per patient episode in a hospital setting varied from £3 – £20,000. Worst-case scenarios (e.g. antibiotics not being an option anymore) were not evaluated in studies, so the true cost of antibiotic resistance could be much greater overall.

Audit Aims

This audit was carried out between 18/01/2016 - 12/02/2016.

The aims were to assess if the local Trafford CCG Guidelines were followed with respect to:

- The investigative approach used in women above the age of 16 who present with symptoms typical of uncomplicated lower UTI.
- The antibiotics prescribed for women with uncomplicated lower UTI.

This information was compared to the RCGP Audit Template.

The audit template can be found using the following QR code:

Audit Methodology

The study was completed retrospectively, using the EMIS system. Clinical codes where patients with ‘Urinary Tract Infection’, ‘UTI’, Site Not Specified, ‘Cystitis’ or ‘Suspected UTI’ were sampled.

Inclusion criteria were female patients and patients above the age of 16. Exclusion criteria were patients with catheters or pregnant at the time of diagnosis.

Search criteria found a total of 65 patients - all of these patients were used in the study. Using all the available patients removed the possibility of selection bias.

Audit Results

A total of 65 patients were assessed. Figure 1 describes the outcome of the consultation for patients presenting with symptoms of uncomplicated UTI.

Discussion

The RCGP Audit template suggests an 80% standard to be reached, and so this audit highlights that some changes could be considered. The audit found that 55% of patients were managed according to local protocol for uncomplicated UTI.

Guidelines suggest patients presenting with less than 3 symptoms typical of a UTI should undergo a urine dipstick test. Results found 7 patients presented with less than 3 symptoms and were prescribed antibiotics without the use of a urine dipstick. 11 patients whose symptoms were not recorded, were prescribed antibiotics without the use of a urine dipstick test. It is interesting to note that the results found that a proportion of these patients (as well as a further 7) were prescribed Cefalexin treatment without attempting 1st line - and the literature review found that Cefalexin is recognised to predispose patients to C. difficile infection. Local guidelines only recommend their use empirically when trimethoprim AND nitrofurantoin fails.

In the 29 cases where guidelines were not adhered to, 15 were due to incorrect duration of antibiotics prescribed (51%). The literature review demonstrated long term treatment provided no benefit in providing symptomatic cure compared to 3-day therapy. Not only will prescribing short-term therapy save costs, it is important to note that 5-10 day treatment produced more adverse effects in patients according to one Cochrane review.

Recommendations

1. Dissemination of the audit results and discussion points to all members of the practice team involved with UTI diagnosis and management, including receptionists who may initially handle samples or patient requests for an appointment, healthcare assistants, practice nurses, advanced nurse practitioners and GPs.
2. GP partners to consider activation of EMIS computer pop-up alerts with reminders of the audit standards. It is recognised that multiple ‘pop-up’ alerts can however cause safety risks as if the clinician has to remove too many alerts, they can become ‘blinded’ to them, hence potentially missing key information.
3. For the practice to consider a ‘no prescribing’ policy for telephone consultations, unless 3 symptoms of UTI are present or patient has provided a urine sample. However, it is recognised that clinical judgement would be employed.
4. Re-audit using the same template following discussion and/or action of the points above and assessment of any changes.

References


