URINARY TRACT INFECTION (UTI)

Symptoms occurring in both upper UTI (UUTI) and lower UTI (LUTI):

- Dysuria
- Urinary frequency
- haematuria
- Lower abdominal tenderness
- The presence of dysuria and frequency in women indicates a probability of UTI of over 90%.

Symptoms indicative of UUTI:

- pyrexia
- loin pain
- systemic symptoms

Management:

- Urinalysis
  The diagnosis of UTI is primarily based on symptoms and signs, particularly combinations of confirmatory symptoms (dysuria, frequency) and absence of features
  that suggest alternative diagnoses (vaginal discharge and irritation).
  However, urinalysis may contribute additional information to inform management. Dipstick tests are only indicated for women who have minimal signs and symptoms.
  Where only one symptom or sign is present, a positive dipstick test (leucocytes or nitrite) is associated with a high probability of bacteriuria (80%) and negative tests are associated with much lower probability (around 20%).
- Mid-Stream Specimen of Urine

  An MSSU should be sent before starting treatment if:

  -male patient

  -there are symptoms or signs of upper UTI in a non-pregnant woman

  -there are upper or lower UTI symptoms in a pregnant woman

  -symptoms have persisted after empirical treatment

-risk factors for antimicrobial resistance :e.g. care home resident, recurrent UTI, hospitalisation >7d in the last 6 months, recent travel to a country with increased resistance (outside Europe and Australasia), history of UTI resistant to first line treatment

- There is no need to await the MSSU result before commencing treatment.
- In women consider possibility of pregnancy prior to treatment.
- Consider the possibility of sexually transmitted infections and pelvic inflammatory disease and screen/treat appropriately.
- In non-pregnant women with only mild symptoms, consider delayed prescribing. Adequate hydration and anti inflammatories e.g. ibuprofen may alleviate symptoms and avoid the need for antibiotics.
- Narrow range antibiotics remain first line choice: broad spectrum drugs increase the risk of clostridium difficile, MRSA and resistant UTIs.

In uncomplicated lower UTI in non-pregnant women, treat with:-

Trimethoprim 200mgs bd for 3 days

Alternative nitrofurantoin 50mg 6-houly for 3 days

there is no need to send an MSSU at this point

In lower UTI pregnant women (send an MSSU), treat with:-

1st/2nd Trimesters Nitrofurantoin 50mg 6-hourly for 7 days (theoretical risk neonatal haemolysis at term)

or

Amoxicillin 500mgs tds for 7 days **(only use if sensitivies are known)**

3rd Trimester Cefalexin 500mg 8-hourly

If signs or symptoms of upper UTI are present in non-pregnant females

Trimethoprim 200md bd for 7 days

If resistant organism suspected: Co-amoxiclav 625mg tds for 7 days

Or if true penicillin allergy: ciprofloxacin 500mg bd for 7 days

Upper UTI in pregnancy:

See NHS GGC Antibiotic Policy Obstetric Patients

In lower UTI in men:

Trimethoprim 200mg BD 7 days or Nitrofurantoin 50mg 6-hourly for 7 days

Follow-up

- Urinary tract infection is rare in young men. All men with proven UTI should be referred to their GP for referral for imaging of the renal tract (ultrasound or IVP). Men with recurrent UTI should be referred to a urologist.
- Women with recurrent UTI may benefit from imaging of the renal tract and consideration of prophylactic antibiotics. A stat dose of nitrofurantoin 100mg or trimethoprim 50mg can be used to prevent postcoital UTI. Recurrent UTI is best managed by urologists following referral by the woman's GP.

<u>Non Antibiotic Treatment</u>

Cranberry products:
There is evidence that cranberry products reduce the incidence of UTIs at 12 months compared to placebo/control and are effective in reducing the incidence of UTIs in women with recurrent UTIs. Cranberry capsules may be more convenient than juice and high strength capsules may be most effective. There is no evidence to support the effectiveness of cranberry products for treating symptomatic episodes
of UTI.

Oestrogen Therapy:
Genitourinary atrophy may increase the risk of bacteriuria and the role of oestrogen therapy in reducing the risk of symptomatic UTI has been investigated . It should not be used routinely for the prevention of recurrent UTIs in post menopausal women but local estrogen therapy may be appropriate for some.

N.B: Warfarin should not be taken with Cranberry products owing to pharmacokinetic interaction.

References

- NHS GGC Infection Management Guidelines Empirical Antibiotic Therapy in Adults Nov 2020 (accessed Dec 2022)

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- NICE Quality Standard 90: Urinary Tract Infections in Adults 2015 (accessed Dec 2022)