Importance of UTI in Obstetrics and Gynaecology.

Hennie Lombaard
Maternal and Fetal Medicine Unit
Introduction:

• UTI is the second most common infection encountered by physicians.
• It is seen more frequently in women than in men.
• 50% of women will have more than one infection in their lifetime.
Reason for why women suffer from more UTI

• Women have a short urethra comparing to men

• Urethra in close proximity to vagina and anus.
UTI in Obstetrics
Acute Cystitis:

• Incidence is 1 to 3% in pregnancy.
• Symptoms and Signs:
  – Frequency
  – Terminal dysuria
  – Urgency
  – Suprapubic pain
  – Hesitancy
  – Dribbling
  – Hematuria
Acute Cystitis

• Clinical findings:
  – Suprapubic tenderness during palpation.
Acute Cystitis

• Side room investigations:
  – Leukocyte esterase are positive
  – Nitrate test are positive

• Urinary Culture:
  – $10^2$ to $10^5$ organism per ml
Acute Cystitis:

- Organisms most commonly found:
  - *E. Coli*
  - *Klebsiella pneumonia*
  - *Proteus*
  - Group B streptococci
  - Enterococci
  - Staphylococci
Management of Acute Cystitis

• Do a good clinical evaluation

• Send urine for MCS
Antimicrobial agents:

- Single Dose Therapy:
  - Amoxicillin 3gr
  - Ampicillin 2gr
  - Cephalosporin 2gr
  - Nitrofurantoin 200mg
  - Trimetroprim-sulphamethoxazole 320/1600mg
Antimicrobial agents:

• Three-Day Therapy:
  – Amoxicillin 500mg tds
  – Ampicillin 250mg qid
  – Cephalosporin 250mg qid
  – Nitrofurantoin 50 – 100mg qid
Asymptomatic Bacteriuria: (ASB)

• Definition:
  – The presence of actively multiplying bacteria within the urinary tract without symptoms or signs.
  – The presence of more than $10^5$ organism per ml

• Incidence at Kalafong Hospital:
  – 25% with no significant difference between HIV positive and HIV negative women.
Complications of ASB

- Pyelonefritis
- Intra uterine growth restriction
- Premature rupture of membranes
- Premature labour
- Chorioamnionitis
- Amniotic fluid infection syndrome
Management of ASB

• The same as for acute cystitis.

• Important: Every pregnant women who start with her ante natal care should have urine send for MCS to determine if she has ASB.
Acute Pyelonephritis

• Clinical presentation:
  – Fever up to 40°C
  – Hypothermia as low as 34 °C
  – Shaking chills
  – Aching pain in lumbar flank areas

• It can also be associated with:
  – Nausea and vomiting
  – Frequency
  – Urgency
  – Dysuria
  – Hematuria
Acute Pyelonephritis

• Organisms involved:
• Most commonly:
  – *E. Coli*
  – *Klebsiella pneumonia*
  – *Proteus*
• In immunocompromised patients:
  – *Pseudomonas*
  – *Enterobacter*
  – *Serratia*
Complications:

- Reduction in glomerular filtration
- Thermoregulatory instability
- ARDS
- Preterm labour
- Septic shock
Management

• Admission
• Send urine for MCS
• Do FBC, UKE
• Start on antibiotics
  – Cefuroxime 750mg tds ivi
  – Metronidazole 400mg tds po
Management

• If no response within 24 hours:
  – Add Gentamicyn 240mg imi daily

• If sensitivity is available change to sensitive antibiotics.

• If fever gone for 24 to 48hrs chance to sensitive oral antibiotics for 10 days.
Management

• If no improvement within 24 to 48 hours:
  – Make sure patient is on sensitive drugs
  – Do kidney sonar to rule out abscess or obstruction

• After 14 days repeat urine MCS.
Importance of urine MCS:

• In the pregnant patient the differential diagnosis for lower abdominal pain and dysuria are:
  – Cystitis
  – Amniotic fluid infection syndrome
  – Ligament pain
  – Pielonefritis
  – Chorio-amnionitis
UTI in Gynaecology
Recurrent UTI

• Definition:
  – More than 3 urinary tract infections within 1 year.

• Causes:
  – 99% is re-infection especially *E. Coli*
  – Habits for example sexual intercourse, toilet and bubble bath may play a role.
Recurrent UTI

• Begin 3 to 6 months of antibiotic suppression with either Nitrofurantoin or Trimetroprim-sulphamethoxazole daily.

• Consider the possibility of a renal stone or structural abnormalities.
Post operative infections

• UTI is the most common site for hospital acquired infection.

• Therefore if a patient develop post operative fever a urinary tract infection should be ruled out.
Gynaecological procedures associated with high incidence of UTI

• Radical hysterectomy.

• Procedures for incontinence
Gynaecological conditions associated with UTI

• Bladder prolaps
Conclusion

• Urinary tract infection is associated with high morbidity and even mortality in Obstetrics and Gynaecology.

• Every woman with suspected infection should have a urine MCS.

• Every pregnant woman should have at least one MCS at the start of her antenatal care.
Conclusion

• UTI should always be on the differential diagnosis for a gynae or obstetric patient with lower abdominal pain.