

Importance of UTI in Obstetrics and Gynaecology.

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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
 - Trimetoprim-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

- Pyelonephritis
- 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, UAE
- 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 change to sensitive oral antibiotics for 10 days.

Management

- If no improvement with in 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 Trimethoprim-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 women with suspected infection should have a urine MCS.
- Every pregnant women should have at least one MCS at the start of her ante natal care.

Conclusion

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