King Saud University Medical City
Department of Obstetrics and Gynecology
Course 482

PELVIC INFLAMMATORY DISEASE (PID)

PID

- SPECTRUM DISEASE INVOLVE CX, UTERUS, TUBES
- MOST OFTEN → ASCENDING SPREAD OF MICROORGANISMS FROM VAGINA & ENDOCERVIX TO ENDOMETRIUM, TUBES, CONTIGUOUS STRUCTURES
- INCIDENCE ACUTE PID 1–2% OF YOUNG SEXUALLY ACTIVE WOMEN EACH YEAR

ETIOLOGY

- NEISSERIA GONORRHOEAE COMMON CAUSE OF PID
- 85% OF INFECTION → SEXUALLY ACTIVE FEMALE OF REPRODUCTIVE AGE
- 15% OF INFECTION OCCUR AFTER PROCEDURES THAT BREAK CERVICAL MUCOUS BARRIER
- BACTERIA CULTURE DIRECT FROM TUBAL FLUID COMMON : N. GONORRHOEAE, C. TRACHOMATIS, ENDOGENOUS AEROBIC, ANAEROBIC, GENITAL MYCOPLASMA SPP.

PID

- C. TRACHOMATIS
  - PRODUCE MILD FORM OF SALPINGITIS
  - SLOW GROWTH (48–72 HR)
  - INTRACELLULAR ORGANISM
  - INSIDIOUS ONSET
  - REMAIN IN TUBES FOR MONTHS/YEARS AFTER INITIAL COLONIZATION OF UPPER GENITAL TRACT
  - MORE SEVERE TUBES INVOLVEMENT

PID

- N. GONORRHOEAE
  - GRAM –VE DIPLOCOCCUS
  - RAPID GROWTH (20–40 MIN)
  - RAPID & INTENSE INFLAMMATORY RESPONSE
  - 2 MAJOR SEQUELAE
    - INFERTILITY & ECTOPIC PREGNANCY, STRONG ASSO. WITH PRIOR CHALAMYDIA INFECTION

RISK FACTORS

- STRONG CORRELATION BETWEEN EXPOSURE TO STD
- AGE OF 1ST INTERCOURSE
- FREQUENCY OF INTERCOURSE
- NUMBER OF SEXUAL PARTNERS
- MARITAL STATUS ; 33% → NULLIPAROUS

RISK FACTORS

- INCREASE RISK
  - IUD USER (MULTIFILAMENT STRING
  - SURGICAL PROCEDURE
  - PREVIOUS ACUTE PID
- REINFECTION → UNTREATED MALE PARTNERS 80%
- DECREASE RISK
  - BARRIER METHOD
  - OC

DIAGNOSIS

- COMMON CLINICAL MANIFESTATION
  - LOWER ABDOMINAL PAIN 90%
  - CERVICAL MOTION TENDERNESS
  - ADNEXAL TENDERNESS
  - FEVER
  - CERVICAL DISCHARGE
  - LEUKOCYTOSIS

DIFFERENTIAL DIAGNOSIS

- ACUTE APPENDICITIS
- ENDOMETRIOSIS
- TORSION/RUPTURE ADX MASS
- ECTOPIC PREG
- LOWER GENITAL TRACT INFECTION

PID

- 75% ASSO. ENDOCERVICAL INFECTION & COEXIST PURULENT VAGINAL D/C

- FITZ-HUGH-CURTIS SYNDROME :
  - 1-10%
  - PERIHEPATIC INFLAMMATION & ADHESION
  - S/S ; RUQ PAIN, PLEURITIC PAIN, TENDERNESS AT RUQ ON PALPATION OF THE LIVER
  - MISTAKEN DX ; ACUTE CHOLECYSTITIS, PNEUMONIA

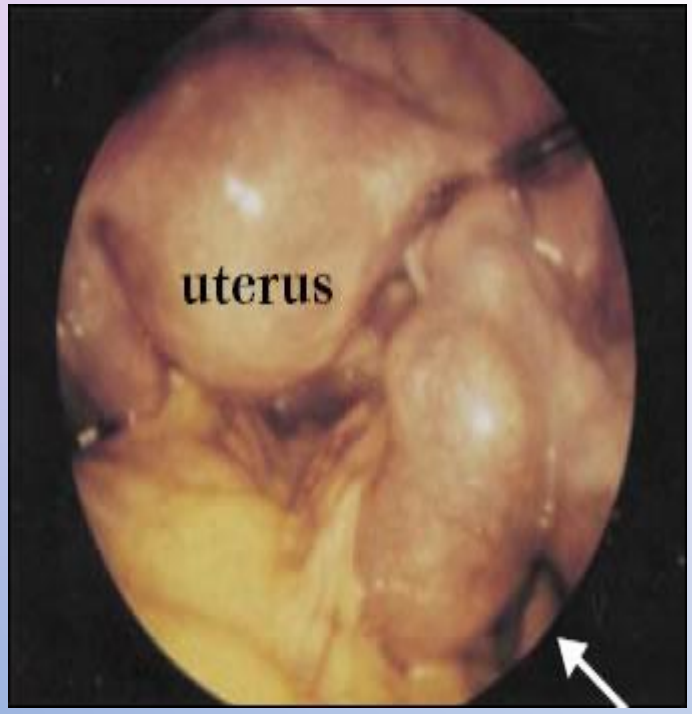
FITZ-HUGH-CURTIS

PID DX

- CBC
- ESR
- C-REACTIVE PROTEIN
- VAGINAL & CERVICAL SWAB
- U/S, CT, MRI
- CULDOCENTESIS
- LAPAROSCOPIC VISUALIZATION
  - MOST ACCURATE METHOD FOR CONFIRM PID
  - ALL PT. WITH UNCERTAIN DX, NOT RESPONSE TO RX

- * -VE GRAM SMEAR NOT R/O PID

PID



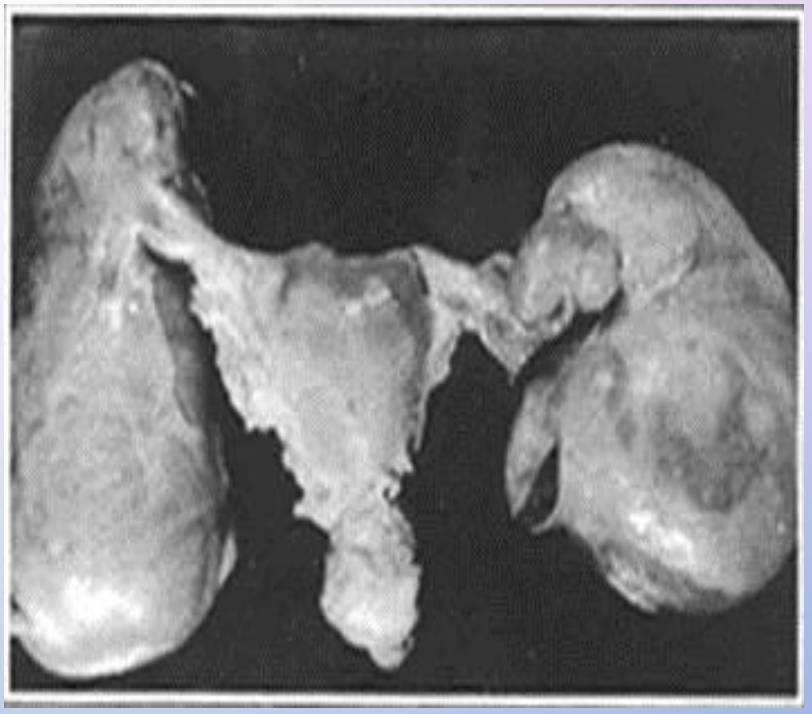


Table 15.3. Clinical Criteria for the Diagnosis of Pelvic Inflammatory Disease

Symptoms
None necessary
Signs
Pelvic organ tenderness Leukorrhea and/or mucopurulent endocervicitis
Additional criteria to increase the specificity of the diagnosis
Endometrial biopsy showing endometritis Elevated C-reactive protein or erythrocyte sedimentation rate Temperature higher than 38°C Leukocytosis Positive test for gonorrhea or chlamydia
Elaborate criteria
Ultrasound documenting tuboovarian abscess Laparoscopy visually confirming salpingitis

SEQUELAE

- INFERTILITY
  - ¼ OF PT HAVE ACUTE SALPINGITIS
  - OCCUR 20%
  - INFERTILITY RATE INCREASE DIRECT WITH NUMBER OF EPISODES OF ACUTE PELVIC INFECTION

SEQUELAE

- ECTOPIC PREGNANCY
  - INCREASE 6-10 FOLD
  - 50% OCCUR IN FALLOPIAN TUBES (PREVIOUS SALPINGITIS)
  - MECHANISM ; INTERFERE OVUM TRANSPORT ENTRAPMENT OF OVUM

SEQUELAE

- CHRONIC PELVIC PAIN
  - 4 TIMES HIGHER AFTER ACUTE SALPINGITIS
  - CAUSED BY HYDROSALPINX, ADHESION AROUND OVARIES
  - SHOULD UNDERGO LAPAROSCOPE → R/O OTHER DISEASE
- TOA 10%
- MORTALITY
  - ACUTE PID 1%
  - RUPTURE TOA 5-10%

TREATMENT

- THERAPEUTIC GOAL
  - ELIMINATE ACUTE INFECTION & SYMPTOMS
  - PREVENT LONG–TERM SEQUELAE

MEDICATION

- EMPIRICAL ABX COVER WIDE RANGE OF BACTERIA
- TREATMENT START AS SOON AS CULTURE & DIAGNOSIS IS CONFIRMED/SUSPECTED
  - FAILURE RATE, OPD ORAL ATB → 10-20%
  - FAILURE RATE, IPD IV ATB → 5-10%
- REEVALUATE 48-72 HRS OF INITIAL OPD THERAPY

CRITERIA FOR HOSPITALIZATION

TABLE 28.3.
Criteria for Hospitalization of Patients With Acute Pelvic Inflammatory Disease

The following criteria for hospitalization are based on observational data and theoretical concerns:

- Surgical emergencies such as appendicitis cannot be excluded.
- The patient is pregnant.
- The patient does not respond clinically to oral antimicrobial therapy.
- The patient is unable to follow or tolerate an outpatient oral regimen.
- The patient has severe illness, nausea and vomiting, or high fever.
- The patient has a tuboovarian abscess

CDC RECOMMENDED TREATMENT REGIMENS FOR OPD OF ACUTE PID

Table 15.4. CDC Guidelines for Treatment of Pelvic Inflammatory Disease

Outpatient Treatment

Regimen A

Ofloxacin, 400 mg orally 2 times daily for 14 days, or
Levofloxacin, 500 mg orally once daily for 14 days
With or Without:
Metronidazole, 500 mg orally 2 times daily for 14 days

Regimen B

Cefoxitin, 2 g intramuscularly, plus *probenecid,* 1 g orally concurrently, or
Ceftriaxone, 250 mg intramuscularly, or
Equivalent cephalosporin
Plus:
Doxycycline, 100 mg orally 2 times daily for 14 days
With or Without:
Metronidazole, 500 mg orally twice a day for 14 days

CDC RECOMMENDED TREATMENT REGIMENS FOR IPD OF ACUTE PID

Inpatient Treatment

Regimen A

Cefoxitin, 2 g intravenously every 6 hours, *or*
Cefotetan, 2 g intravenously every 12 hours,
Plus:
Doxycycline, 100 mg orally or intravenously every 12 hours

Regimen B

Clindamycin, 900 mg intravenously every 8 hours
Plus:
Gentamicin, loading dose intravenously or intramuscularly (2 mg/kg of body weight) followed by a maintenance dose (1.5 mg/kg) every 8 hours

TREATMENT

- RX MALE PARTNERS & EDUCATION FOR PREVENTION REINFECTION

- RX MALE PARTNERS → REGIMENS FOR UNCOMPLICATED GONORRHOEAE & CHLAMYDIAL INFECTION
  - CEFTRIAXONE 125 MG IM FOLLOW BY
    - DOXYCYCLINE (100) 1X2⊙ PC X7DAYS OR
    - AZITHROMYCIN 1GM⊙ OR
    - OFLOXACIN (300) 1X2⊙ PC X7DAYS

SURGICAL TREATMENT

- LAPAROTOMY FOR
  - SURGICAL EMERGENCIES
  - DEFINITE RX OF FAILURE MEDICAL TREATMENT
- LAPAROSCOPY
  - CONSIDER IN ALL PT WITH DDX OF PID & WITHOUT CONTRAINDICATION
  - R/O SURGICAL EMERGENCY
- EVIDENCE OF CURRENT / PREVIOUS ABSCESS
- ACUTE EXACERBATION OF PID WITH BILATERAL TOA

RUPTURED PELVIC ABSCESS

- MORTALITY RATE 10%
- CAN RUPTURE SPONTANEOUS INTO
  - RECTUM
  - SIGMOID COLON
  - BLADDER
  - PERITONEAL CAVITY
- ALMOST NEVER IN VAGINA


THE END
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