PELVIC INFLAMMATORY DISEASE (PID)

What does pelvic inflammatory disease refer to?

PID is a general term that refers to infection in the upper female reproductive tract: the uterus, fallopian tubes (salpinges), ovaries, or surrounding tissues.

What are the three major complications from PID?

1. Infertility
2. Ectopic pregnancy
3. Chronic pelvic pain

Which microorganisms can cause PID?

- Most cases are caused by two sexually transmitted organisms: *Neisseria gonorrhoeae* that causes gonorrhea and *Chlamydia trachomatis* that causes chlamydial infections.
- Other pathogens may also cause or contribute to PID, such as the anaerobic organisms causing bacterial vaginosis (BV).

What are the signs and symptoms of PID? How do they vary?

Acute PID is characterized by lower abdominal pain, fever over 100°, nausea, and vomiting.

Subacute PID includes symptoms of heaviness or dull aching of the lower abdomen, fever of 99-100°, dyspareunia (pain during or after sexual intercourse), backache, and malaise.

Silent PID exhibits minimal or no symptoms. Nevertheless, this low level inflammation may damage the fallopian tubes and surrounding structures.

How does gonococcal PID differ from PID caused by other pathogens?

PID related to gonorrhea is usually more acute and produces more purulent discharge (pus).

PID caused by other organisms is more likely to be mild or completely asymptomatic.

How does PID develop and spread in the body?

In normal conditions, the cervix has a thick plug of mucus that helps prevent passage of organisms through the cervix, but during menstruation, this plug is discharged.

When organisms are able to pass through the cervix, they can infect the endometrium and spread to fallopian tubes and surrounding structures such as the ovaries.

In some severe cases, ruptured abscesses, inflammation and pus can infect the abdominal cavity causing peritonitis and putting a woman’s life in danger.
Which women are most at risk for PID?

Women at risk for STD’s especially gonorrhea and chlamydial infections are at risk for PID, that is, sexually active younger women with unsafe sex practices.

Women with PID not caused by *N. gonorrheae* or *C. trachomatis* are more likely to be older with safer sex practices.

What are non-sexual causes of PID?

Surgery of the genital tract may introduce bacteria.

The insertion of an intrauterine device (IUD) may increase the risk of PID.

Douching may force bacteria into the endometrium and also can increase the risk for bacterial vaginosis.

Induced abortion and caesarean delivery may increase the risk. Testing prior to these procedures is advised.

How is PID diagnosed? What are the challenges?

Diagnosing PID is challenging because many of the signs and symptoms overlap with other illnesses. Symptoms range from mild to severe. There is no single test. Diagnosis uses a combination of clinical symptoms and signs, examination, and laboratory tests.

A pelvic exam can determine lower abdominal tenderness which is often an indication of PID. In young women if no other tests are possible it is preferable to assume and treat for PID.

Imaging with CT scan or MRI is more specific but expensive and rarely used for diagnosis.

Surgical diagnostic techniques include laparoscopy and tissue samples.

Other important causes of lower abdominal pain and tenderness include ectopic pregnancy and appendicitis. Whenever PID is diagnosed, a pregnancy test should be used to rule out ectopic pregnancy.

What are the consequences of PID and how can they be avoided?

PID is the only preventable cause of infertility. Infertility occurs in about 12% of women with a history of PID.

Ectopic pregnancy is a serious consequence of PID, and occurs when a fertilized egg remains in the fallopian tube.

Chronic lower abdominal pain occurs after one episode of PID 10-15% of the time. This doubles after a second episode.

Other consequences are dysparuenia, endometriosis, avoidance of sex, and depression.

Gynecologic surgical procedures to address PID consequences are common.

The sooner a diagnosis of PID is made, and therapy instituted, the better the woman’s chance of avoiding complications. After one episode of acute PID about 25% of women suffer major complications. After two episodes, this increases to about 40%. A three day delay in treatment can increase complications two- or three-fold.
What is the standard treatment for PID?

PID is normally treated with a 14 day course of antimicrobials.

The CDC STD Treatment Guidelines outline the specifics.

HIV infection may increase the risk for PID. All women newly diagnosed with HIV should have a pelvic exam and tests for gonorrhea and chlamydial infection.

What are the recommendations for case management of PID?

Local policy dictates a partner service provider’s responsibility. PID is not a reportable disease.

At minimum, patients should be encouraged to refer sex partners for exam and treatment if they have had sexual contact with the patient during 60 days preceding onset of the patient’s symptoms.

Patients should be given PID facts, advised on how to take any prescribed medications and return for follow-up visits, cautioned to refrain from sex until all medication is taken and partners treated, informed to return if symptoms persist or recur and advised to adopt a realistic risk-reduction plan.