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Review Article

Scope of Homoeopathic Medicines in Pelvic Inflammatory Diseases - A Case Study

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ABSTRACT

Pelvic Inflammatory Disease is not a disease, in fact it is a syndrome particularly because of the wide range of symptoms; it does not just repress one disease but several disease processes. The pelvic organs include the uterus (womb), fallopian tubes, ovaries, and cervix. A woman can get pelvic inflammatory disease if bacteria (germs) move up from her vagina and infect her pelvic organs. Many bacteria cause pelvic inflammatory disease. But, most of the cases of PID are caused by bacteria that cause two common sexually transmitted infections (STIS, STDs) - gonorrhea and chlamydia. Infection to travel up from the vagina to the pelvic organ. Symptoms in PID range from subclinical (asymptomatic) to severe. If there are symptoms then fever, cervical motion tenderness, lower abdominal pain, new or different discharge, painful intercourse, or irregular menstrual bleeding may be noted. It is important to note that even asymptomatic PID can and does cause serious harm. Laparoscopic identification is helpful in diagnosing tubal disease, 65-90% positive predictive value in patients with presumed PID. Regular (STI) testing is important for prevention.

Keywords: Homoeopathic Medicines, pelvic inflammatory diseases, case report

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INTRODUCTION

Pelvic inflammatory disease (PID) is an infection of a woman's pelvic organs. The pelvic organs include the uterus (womb), fallopian (fuh-LOH-pee uhn) tubes (tubes), ovaries, and cervix. A woman can get pelvic inflammatory disease if bacteria (germs) move up from her vagina and infect her pelvic organs. Many bacteria cause pelvic inflammatory disease. But, most of the cases of PID are caused by bacteria that cause two common sexually transmitted infections (STIS, STDs) - gonorrhea (gah- nuh-REE-uh) and chlamydia (kluh-MI-dee-uh). Infection to travel up from the vagina to the pelvic organ.

The risk factors to get pelvic inflammatory diseases are having an STI, less than 25 years of age and are having sex, having more than 1 sex partner, douching which can push bacteria into the pelvic organs and cause infection. It can also hide the signs of an infection or having an intrauterine device (IUD). Even if one have pelvic inflammatory disease, one might not have symptoms. The most common symptom of pelvic inflammatory disease is pain in lower abdomen. Some Other symptoms that include

Fever
Vaginal discharge that may have an odor
Painful intercourse
Painful urination

Irregular menstrual bleeding
Pain in the upper right abdomen (rare)
Symptoms in PID range from subclinical (asymptomatic) to severe. If there are symptoms then fever, cervical motion tenderness, lower abdominal pain, new or different discharge, painful intercourse, or irregular menstrual bleeding may be noted. It is important to note that even asymptomatic PID can and does cause serious harm. Laparoscopic identification is helpful in diagnosing tubal disease, 65-90% positive predictive value in patients with presumed PID.

PELVIC INFLAMMATORY DISEASES:

Pelvic inflammatory disease (PID) is infection of a woman's reproductive organs. Infection spreads upward from the cervix to the uterus, Fallopian tubes, ovaries, and surrounding structures. Some of these conditions are also referred to as:
Cervicitis (inflammation of the cervix);
Salpingitis (inflammation of the Fallopian tubes),
Endometritis (inflammation present in the lining tissues of the uterus); and
Peritonitis (inflammation of the peritoneum, the membrane that lines the abdominal cavity and covers most of the abdominal organs).

Cervicitis: Cervicitis is swelling of the uterine cervix. Cervicitis in women has many features in common with urethritis in men and many cases are caused by sexually transmitted infections. Non-infectious causes of cervicitis can include intrauterine devices, contraceptive diaphragms, and allergic reactions to spermicides or condoms. Cervicitis can be caused by any of a number of infections, of which the most common are chlamydia and gonorrhea, with chlamydia accounting for approximately 40% of cases. Trichomonas vaginalis and herpes simplex are less common causes of cervicitis
Mucopurulent cervicitis (MPC) is characterized by a purulent or mucopurulent endocervical exudate visible in the endocervical canal or in an endocervical swab specimen. Some specialists also diagnose MPC on the basis of easily induced cervical bleeding.
Although some specialists consider an increased number of poly morphonuclear white blood cells on endocervical Gram stain as being useful in the diagnosis of MPC, this criterion has not been standardized, has a low positive- predictive value (PPV), and is not available in some settings. (cn)
MPC often is without symptoms, but some women have an abnormal vaginal discharge and vaginal bleeding (e.g., after sexual intercourse). MPC can be caused by Chlamydia trachomatis or Neisseria gonorrhoeae; however, in most cases neither organism can be isolated MPC can persist despite repeated courses of antimicrobial therapy.
Because relapse or reinfection with C trachomatis or N. gonorrhoeae usually does not occur in persons with persistent cases of MPC, other non-microbiologic determinants (e.g., inflammation in the zone of ectopy) might be involved.
Patients who have MPC should be tested for C. trachomatis and for N. gonorrhoeae with the most sensitive and specific test available. However, MPC is not a sensitive predictor of infection with these organisms; most women who have C trachomatis or
N. gonorrhoeae do not have MPC.

Salpingitie: Salpingitis is an infection and swelling in the fallopian tubes. It is often used synonymously with Pelvic inflammatory disease (PID), although PID lacks an accurate definition and can refer to several diseases of the female upper genital tract, such as endometritis, oophoritis, myometritis, parametritis and infection in the pelvic peritoneum. salpingitis only refers to infection and inflammation in the fallopian tubes.
The infection usually has its origin in the vagina, and ascends to the fallopian tube from there. Because the infection can spread via the lymph vessels, infection in one fallopian tube usually leads to infection of the other.
It's been theorized that retrograde menstrual flow and that the cervix opens during menstruation allows the infection to reach the fallopian tubes.
Other risk factors include: Surgical procedures, breaking the cervical barrier:
endometrial biopsy
curettage
hysteroscopy
Another risk is factors that alter the microenvironment in the vaginal and cervix, allowing infecting organisms to proliferate and eventually ascend
to the fallopian tube:
antibiotic treatment
ovulation
menstruation
sexually transmitted disease (STD)
Finally, sexual intercourse may facilitate the spread of disease from vagina to fallopian tube.
Coital risk factors are:
Uterine contractions
Sperm, carrying organisms upwards.
The bacteria most associated with salpingitis are
N. gonorrhoeae
Chlamydia trachomatis

Mycoplasma
Staphylococcus
Streptococcus

Endometritis: Endometritis refers to swelling of the endometrium,"
the inner lining of the uterus. Pathologists have traditionally classified endometritis as either acute or chronic: acute endometritis is characterized by the presence of microabscesses or neutrophils within the endometrial glands, while chronic endometritis is distinguished by variable numbers of plasma cells within the endometrial stroma. The most common cause of endometritis is infection. Symptoms include lower abdominal pain, fever and abnormal vaginal bleeding or discharge.

Caesarean section, prolonged rupture of membranes and long labor with multiple vaginal examinations are important risk factors.Acute Endometritis is characterized by infection. The organisms isolated are most often polymicrobial. The most common causes of infection are believed to be because of compromised abortions, delivery, medical instrumentation, and retention of placental fragments. Histologically. neutrophilic infiltration of the endometrial tissue is present during acute endometritis. Chronic Endometritis is characterized by the presence of plasma cells in the stroma. The most common causes are chronic pelvic inflammatory disease (PID), tuberculosis, and chlamydia. Patients suffering from chronic endometritis often have an underlying cancer of the cervix or endometrium. Chronic granulomatous endometritis is most often tuberculous in etiology.

Peritonitis: Peritonitis is an inflammation of the peritoneum, the serous membrane that lines part of the abdominal cavity and viscera. Peritonitis may be localised or generalised, and may result from infection (often due to rupture of a hollow organ as may occur in abdominal trauma or appendicitis) or from a non- infectious process. This is the out come of so many abdominal cause where PID is a factor only.

CAUSATIVE ORGANISM: All of these conditions may be considered as specific diseases but many investigators group them together as variations of PID, especially if they are caused by either Chlamydia trachomatis ot Neisseria gonorrhoeae.

CHLAMYDIA TRACHOMATIS: Chlamydia trachomatis is an obligate intracellular human pathogen, is one of three bacterial species in the genus Chlamydia. C. trachomatis is a Gram-negative bacteria, therefore its cell wall components retain the counter-stain safranin and appear pink under a light microscope. Identified in 1907, C trachomatis was the first chlamydial agent discovered in humans **NEISSERIA GONORRHOEAE:** Neisseria gonorrhoeae, also known as gonococel (plural), or gonococcus (singular), is a species of Gram-negative coffee bean-shaped diplococci bacteria N. gonorrhoea was first described by Albert Neisser in 1879.

Neisseria are fastidious Gram-negative cocci that require nutrient supplementation to grow in laboratory cultures. Specifically, they grow on chocolate agar with carbon dioxide. These cocci are facultatively intracellular and typically appear in pairs (diplococci), in the shape of coffee beans. Of the eleven species of Neisseria that colonize humans, only two are pathogens. N. gonorrhoeae is the causative agent of gonorrhoea and is transmitted via sexual contact N. gonorrhoeae are motile (twitching motility) and possess type IV pili to adhere to surfaces. The type IV pili operate mechanistically similar to a grappling hook. Pili extend and attach to a substrate which signals the pilus to retract, dragging the cell forward. N. gonorrhoeae are able to pull 100,000 times their own weight and it has been claimed that the pili used to do so are the strongest biological motor known to date, exerting one nanonewton.

Infection of the genitals can result in a purulent (or pus-like) discharge from the genitals which may be foul smelling. Symptoms may include inflammation, redness, swelling, dysuria and a burning sensation during urination.

N. gonorrhoeae can also cause conjunctivitis, pharyngitis, proctitis or urethritis, prostatitis and orchitis.

Conjunctivitis is common in neonates (newborns), and silver nitrate or antibiotics are often applied to their eyes as a preventive measure against gonorrhoea. Neonatal gonorrheal conjunctivitis is contracted when the infant is exposed to N. gonorrhoeae
in the birth canal and can lead to corneal scarring or perforation, resulting in blindness in the neonate.

Disseminated N. gonorrhoeae infections can occur, resulting in t endocarditis, meningitis or gonococcal dermatitis-arthritis syndrome. Dermatitis-arthritis syndrome presents with arthralgia, tenosynovitis and painless non-pruritic (non-itchy) dermatitis. Infection of the genitals in females with N. gonorrhoeae can result in pelvic inflammatory disease if left untreated, which can result in infertility. Pelvic inflammatory disease results if N. gonorrhoeae travels into the pelvic

peritoneum (via the cervix, endometrium and fallopian tubes). Infertility is
caused by inflammation and scarring of the fallopian tube. Infertility is a risk to 10 to 20% of the females infected with "N. gonorrhoeae".

MECHANISM OF INFECTION: Bacteria can infect the Fallopian tubes and cause inflammation (salpingitis). When this happens, normal tissue can become scarred and block the normal passage of an egg, causing infertility. But if Fallopian tubes are partially blocked, an egg may implant outside the uterus and cause a dangerous condition called an ectopic pregnancy. An ectopic pregnancy can cause internal bleeding and even death. Scar tissue may also develop elsewhere in the abdomen and cause pelvic pain that can last for months or years.

Epidemiology:

In India , more than a million women are affected by PID each month, and the rate is highest with teenagers and first time mothers. PID causes over 100,000 women to become infertile in the India each year. N. gonorrhoea is isolated in 40-60% of women with acute salpingitis. C. trachomatis is estimated to be the cause in about 60% of cases of salpingitis, which may lead to PID.

CLINICAL PRESENTATION OF PELVIC INFLAMMATORY DISEASE:

SYMPTOMS: If a woman has PID, she may have any of these symptoms:

Abdominal pain (especially lower abdominal pain) or tenderness: This pain may be initially associated with menstrual cycle but later it become a constant character.

Back pain: Pelvic pain can range from mild discomfort or cramping. to severe, intense pain. In either case, the pain is felt internally, not externally as in another common pain disorder in women called vulvodynia. In vulvodynia (or burning vulva syndrome), the external genital area stings.itches, becomes irritated or hurts when any kind of pressure, from tight clothing, urination to intercourse, is experienced.

Chronic pelvic pain (CPP) is characterized by pain in the lower abdomen and pelvic area that has been present for at least six months. Sometimes the pain may travel downward into the legs or around to the lower back. The pain may be felt all of the time or it may come and go, perhaps recurring or intensifying each month with your menstrual period.

Abnormal uterine bleeding

Unusual or heavy vaginal discharge

Painful urination

Painful sexual intercourse

Symptoms not related to the female reproductive organs include fever, nausea, and vomiting.

PID symptoms may be worse at the end of a menstrual period and during the first several days following a period.

SIGNS: Physical exam findings in PID often include the following:

a temperature greater than 101 F (38.3 C).

abnormal vaginal discharge;

lower abdominal tenderness when exterior pressure is applied:

tenderness when the cervix is moved (during a bimanual or speculum exam); or

tenderness in female organs (ovaries).

Emergency

If a female is experiencing the following symoptoms, she should see a health care provider:

Abdominal pain that does not go away

Irregular vaginal bleeding

Foul-smelling vaginal discharge

Unusual vaginal discharge

Fever, nausea, vomiting

Given the long-term complications PID can cause, such as infertility and ectopic pregnancy, it is recommended that females seck immediate medical attention if they have any of these symptoms:

Lower abdominal pain or tenderness

Fever greater than 101° F (38.3 C)

Abnormal or foul-smelling vaginal discharge

Adult women with PID are either closely monitored or admitted to the hospital.

More efftreatment may
take place in the hospital for Adolescent females, who are at a much higher risk of not following treatment plans and of having complications.

The person may be admitted to the hospital if any of the following occur:

The definitive diagnosis of the woman's abdominal/pelvic pain is unclear.

Ectopic pregnancy or appendicitis cannot be ruled out.

She is pregnant.

An abscess (a localized infection) is suspected. A tubo-ovarian abscess (TOA) is a type of disease seen frequently in PID. A tubo-ovarian abscess is a collection of bacteria, pus, and fluid (abscess) that occurs in the Fallopian tube and involves the ovary, It is most often seen in teens. A tubo-ovarian abscess is also more likely to occur in teens adult women who use intrauterine devices (IUD) as birth control. A teen girl with a tubo-ovarian abscess often looks sick, has a fever and pain that makes it difficult to walk. Surgery may be needed to remove or drain the abscess• The

abscess will be treated in the hospital with antibiotics by most physicians.

The person is acutely ill or cannot manage their illness at home.

INVESTIGATION

A health care practitioner usually will diagnose PID by taking the individual's medical history, doing a physical exam, and ordering appropriate tests. Laboratory tests may include the following:

a urine or serum pregnancy test if the female is of childbearing age;

urinalysis to check for bladder and kidney infection;

a complete blood count (although fewer than half of women with acute PID have a high white blood cell count indicating an infection);

cervical cultures gonorrhea and for chlamydia;

tests for other sexually transmitted diseases, including syphilis and HIV;

IMAGING: A pelvic ultrasound, although not routinely done, can be an important tool in diagnosing complications such as tubo-ovarian abscesses, ovarian torsion, ovarian cysts, and ectopic pregnancy. Although unlikely to occur in pregnancy, PID is the most commonly missed diagnosis in ectopic pregnancies and can occur during the first 12 weeks of pregnancy

COMPLICATIONS: PID can cause scarring inside the reproductive organs, which can later cause serious complications, including chronic pelvic pain, infertility, ectopic pregnancy (the leading cause of pregnancy-related deaths in adult females), and other dangerous complications of pregnancy, Occasionally, the infection can spread to in the peritoneum causing inflammation and the formation of scar tissue on the external surface of the liver (Fitz-Hugh Curtis syndrome). Multiple infections and infections that are treated later are more likely to result in complications

Fertility may be restored in women affected by PID. Traditionally tuboplastic surgery was the main approach to correct tubal obstruction or adhesion formation, however success rates tended to be very **PREVENTION:**

- Risk reduction against STIs through barrier methods such as condoms or abstinence; see human sexual behavior for other listing.
- Going to the doctor immediately if symptoms of PID, sexually transmitted infection appear or after learning that a current or former sex partner.
- Getting regular gynecological (pelvic) exams with STI testing to screen for symptomless PID.
- Getting a STI history from your current partner and insisting they be

•tested and treated before intercourse.

Understanding when a partner says that they have been STI tested they usually mean chlamydia and gonorrhea in the US, but that those are not all of the sexually transmissible infections

•Treating partners to prevent reinfection or spreading the infection to other people.

•Diligence in avoiding vaginal activity, particularly intercourse, after the end of a pregnancy.

HOMOEOPATHIC THERAPEUTICS OF PELVIC INFLAMMATORY DISEASES:

ACTAEA RECEMOSA:

Menses too soon and abundant Menses scanty slightly coagulated.

Discharge, dark and coagulated

Modalities - worse morning, cold, during menses, the more the flow, the greater suffering.

ALUMINA

Copious discharge of mucus from vagina before menses, cutting, pinching and labor like pain with frequent desire to urinate.

Menses too early, short, pale followed by great exhaustion Leucorrhoea acrid, profuse transparent, ropy with burning, worse during day time and after menses. Relieved by washing with cold water

ARSENICUM ALBUM:

Menses too profuse and too soon burning in ovarian region. Leucorrhoca acrid burning offensive, thin, pain as from red hot wires. Worse least exertion causes great fatigue better in warm room. In menorrhagia stitching pain in pelvis extending down the thigh.

BELLADONNA:

Sensitive forcing downward, as if all the viscera would protrude through genitals Dryness and heat of vagina, pain in sacrum, Haemorrhage, hot cutting pain from hip to hip, menses and lochia very offensive & hot. Labor pain comes and goes suddenly. Worse from touch, jar noise, draught, afternoon, motion lying down, better by semierect.

BORAX:

Labor like pain with frequent cructation Galactorrhoea, pain in opposite breast. Leucorrhoea like white of eggs with sensation as if warm water was flowing. Menses too soon profuse with gripping, nausea and pain in stomach extending into small of back. Membranous dysmenorrheal sterility. Pruritus of vulval eczema. Worse downward motion noise warm weather, after menses, better by pressure, evening, cold weather.

COLOCYNTHIS:
Boring pain in ovary must draw up double with great restlessness. Round small cystic tumors in ovaries or broad ligaments. Wants to support abdomen by pressure. Bearing down cramps, causing her to bend double.

LILIUM TIGRINUM:
Manifests powerful influence over pelvic organs & some pathological conditions of uterus & ovaries. Indicated in unmarried women. Menses early scanty, dark, clotted. Offensive, flow only when moving.

MAGNESIA PHOSPHORICA:
Menstrual colic, membranous dysmenorrhoea, menses too early, dark stringy, swelling of external part ovarian neuralgia, Vaginismus. Better by bending double, pressure & warmth.

PHOSPHORUS:
Metritis, chlorosis, fistulous cracks after mammary abscess. Slight hemorrhage from uterus between periods. Menses too early and scanty not profuse but lasting too long Weeps before menses. Leucorrhoea profuse smarting. corrosive instead of menses. Amenorrhea with vicarious menstruation. Indicated in uterine polyps.

LACHESIS :
Climacteric troubles palpitation, flushes of heat haemorrhages, vertex headache, and fainting spells worse pressure of clothes. Menses too short to feeble. pains all relieved by the flow. Left ovary very painful & swollen indurated, coccyx and sacrum pain especially on rising from sitting posture. Act well beginning and close of menstruation.

PULSATILLA:
Amenorrhoea, suppressed menses from wet feet, tardy menses. Too late scanty. thick, dark, clotted changeable, intermittent, chilliness, nausea, downward pressure
and painful. Leucorrhoea acrid, burning, creaming, tired feeling. Diarrhoea during and after menses. Consolation ammluration.

PLATINA:
Hyper sensitive part, ovaries sensitive and burn. Menses too early too profuse, dark, clotted, with spasm and painful bearing down. Chilliness, vaginismus, Nymphomania, ovaritis.

SABINA:
Menses profuse bright, uterine pain extends into thigh. Threatened miscarriage. Leucorrhoea after menses, corrosive and offensive. Inflammation of ovaries and uterus after abortion. Pain form sacrum to pubes below upward shooting up to vagina. Hemorrhage partly clotted and partly fluid worst from least motion.

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4. Dictionary of Practical Materia Medica: Clark

DATE	OBSERVATION	PRESCRIPTION
04/12/2022	Came with the pain and dischasrge. Slight relief of lower backache.	Sepia 30/ 2 / 2 days Placebo B.D. x 5 days
15/12/2022	Discharge is relieved to some extent.	SL 200 / 2 / 2 days Placebo B.D. x 5 Days
25/12/2022	Aggravation of discharge. Leucorrhoea is now watery and offensive.	Sepia 200 / 2 / 2 days Placebo B.D. x 5 days
31/12/2022	The symptoms are ameliorated.	SL / BD / 3 Days PL / BD / 8 Days

