

Review of Pelvic Inflammatory Disease in Conventional and Unani Medicine

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Abstract:

Pelvic Inflammatory disease is one of the common gynaecological conditions involving the inflammation of upper genital tract of female genitalia that is fallopian tubes and ovaries. It results due to ascending infections from vagina, Blood borne infections and infection from adjacent peritoneum. This in turn leads to the development of symptoms and if untreated results in long term complications such as Infertility and ectopic pregnancy. In Unani concept the inflammation is due to Su e Mizaj (change in the temperament of the organs), Imtila (accumulation of morbid matters) and imbalance of humours treatment of which with management of Asbab e sitte zaruriya, Dietotherapy, Regimental therapy and Unani formulations is necessary

Keywords: Pelvic Inflammatory Disease, Unani, Amraz e Niswan, Oophoritis, Salpingitis, Infertility, Ectopic pregnancy.

Objectives:

The objective of this review is to understand the pattern of Pelvic Inflammatory Disease, its sign and symptoms while integrating the Unani perspective by exploring the role of Su e Mizaj, Akhlat (Humoural) imbalance and Weakness of Quwwat e Mudabir e Badan in causing pelvic Inflammatory disease.

Methods:

An extensive review of the literature was conducted from classical text by renowned authors. Observational Studies, Randomized control trials published in leading gynaecological journals. Including review of the literature by ancient Unani Physicians to explore the Unani concepts in Pelvic Inflammatory disease.

Need of the Study:

As there is increase in the incidence of Infertility and Ectopic pregnancies. The role of PID signals an early diagnosis of the disease to prevent infertility and ectopic pregnancies as a complication of PID. The Unani literature highlights the view of ancient medical scholars and suggests an alternative treatment hence a comparative review of disease has been included

Introduction:**Definition:**

Pelvic Inflammatory Disease is a common gynaecological condition defined as inflammation of upper genital tract of female including any combination of endometritis, Salpingitis, Tubo ovarian abscess and pelvic peritonitis.^[15]

According to UNANI system of medicine, AL Qanoon (The cannon of Medicine), Alteration of temperament in humours results in abnormal condition in the body. The infection also called tadiya is caused by foreign bodies (Ajsam e khabeesa) spreads in air and enters the body through breathing.

PID or Warm-e-Aza-e-Ana is due to predominance of any of the four humor that is Dam, Balgham, Safra, Sauda which is supposed to be balanced. Unani Concept of Pelvic Inflammatory Disease (PID)

The Unani system of medicine is founded on the theory of Akhlat (four humours), first described by Buqrat (Hippocrates) and further elaborated by later Unani scholars. According to this theory, the human body functions normally when the four humours—Dam (blood), Balgham (phlegm), Safra (yellow bile), and Sauda (black bile)—remain in a balanced state with respect to their quality and quantity. Disturbance in this equilibrium leads to Sue Mizaj (derangement of temperament) and eventually causes disease.

In Unani medicine, inflammatory disorders are generally described under the term Warm (inflammation). Warm develops due to the accumulation of abnormal humours or harmful substances within tissues, resulting in pain, swelling, heat and impairment of normal organ function. The uterus and its surrounding reproductive organs may also become affected by this pathological process.

Pelvic Inflammatory Disease does not have a particular nomenclature in Unani literature; however, it closely corresponds to Warm-e-Rahim (inflammation of the uterus) and may extend to adjacent structures such as the fallopian tubes, ovaries and pelvic tissues ^{[2][3][4]}. Ancient Unani physicians considered this condition to be the result of Fasad-e-Akhlat (vitiation of humours) along with weakness of the body's defensive power (Quwwat-e-Mudabbira-e-Badan).

The uterus may become inflamed due to the predominance of any one of the four humours. Depending upon the dominant humour, the disease is classified into different types:

- Warm-e-Damavi: Caused by predominance of blood, characterized by redness, warmth, throbbing pain and tenderness. It resembles acute inflammatory conditions.
- Warm-e-Safravi: Results from excessive yellow bile and presents with intense heat, burning sensation, severe pain and fever.
- Warm-e-Balghami: Produced by the predominance of phlegm and is associated with coldness, heaviness, pale vaginal discharge and dull aching pain, representing a chronic inflammatory state.
- Warm-e-Saudavi: Due to excess black bile, characterized by hardness, chronic pain, tissue induration and prolonged disease duration.

The causes of uterine inflammation may be external (Asbab-e-Kharijiyah) or internal (Asbab-e-Dakhiliyah). External causes include trauma, difficult labour, excessive and frequent coitus, instrumentation, Trauma to the birth canal, Stagnant lochia, unhygienic practices and exposure to infectious agents. Internal causes include derangement of humours, retention of morbid materials, menstrual abnormalities, weakened immunity and impaired uterine function.

The pathogenesis of Warm involves Sue Mizaj, defective metabolism and accumulation of abnormal humours within the affected organ. This leads to vascular congestion, increased local temperature, pain and swelling. If the abnormal humour is not eliminated or corrected, the inflammatory process may progress to suppuration, fibrosis or chronic pelvic disease.

The clinical manifestations described by Unani physicians include lower abdominal pain, pelvic heaviness, abnormal vaginal discharge, fever, backache, dysmenorrhoea, dyspareunia and infertility. Long-standing inflammation may produce adhesions and affect reproductive performance.

Management in Unani medicine is directed towards correcting the altered temperament (Islah-e-Mizaj), eliminating morbid humours (Tanqiya-e-Mawad), reducing inflammation (Taskeen-e-Warm), relieving pain (Taskeen-e-Alam) and strengthening the uterus (Taqwiyat-e-Rahim). Treatment includes Ilaj-bil-Ghiza (dietotherapy), Ilaj-bil-Dawa (pharmacotherapy) and Ilaj-bil-Tadbeer (regimental therapy) such as Hijama (cupping), Fasd (venesection) and other appropriate procedures depending on the patient's temperament and disease stage. Compound unani formulations possessing Muhallil-e-Warm (anti-inflammatory), Musakkin (analgesic), Mudir-e-Haid (emmenagogue), Dafi'-e-Ufoonat (antimicrobial) and Muqawwi-e-Rahim (uterine tonic) properties are commonly employed to restore normal uterine health.

Thus, the Unani concept of Pelvic Inflammatory Disease emphasizes restoration of humoral balance, removal of pathological materials and strengthening of the reproductive organs, aiming to prevent chronic complications and preserve fertility.

Epidemiology:

The disease usually occurs in sexually active and reproductive age group usually practicing unprotected sex practices ^[11]

Causative Organisms:

The most common cause of PID is sexually transmitted diseases (STD). ^[11]

Gonorrhoea and Chlamydial infections are the leading causes of STD other organisms which cause PID include Mycoplasma, Tubercular bacillus, Viruses and E.coli (30%)

Both Aerobic and Anaerobic Bacteria such as B.fragilis, Fusobacteria, Melaninogenicus, anaerobic cocci contribute for the disease. ^[1]

All over about 40 organisms contribute for the polymicrobial nature of the disease. ^[1]

Pathophysiology:

The bacteria couldn't enter the upper genital tract due to acidic vaginal PH and protective cervical mucous plug. The uterine Endometrial lining is also directed downwards which discourages the upward movement of bacteria when this is altered during menstruation, after abortion and delivery there is the widening of cervical canal and washing away of the protective epithelium, the raw surface which develops in the cavity due to this and increased vaginal pH favour the bacteria to gain entry into the upper genital tract and infect the fallopian tubes which are anatomically related to ovaries in turn causing ovarian infection. The infection spreads to the adjacent structures such as peritoneum and causes pelvic peritonitis.

Apart from these, Intrauterine manipulations like Manual removal of placenta, Curettage for evacuation, IUCD insertion and Removal not done under aseptic conditions favours the organisms to reach upper genital organs. ^{[1][11]}

Sign and Symptoms:

Pelvic pain or lower abdominal pain

Vaginal Discharge

Dyspareunia

Abnormal Vaginal bleeding

Cervical motion tenderness

Fever

Adnexal mass in PID suggests Tubo ovarian abscess.^{[7][1]}

According to Shaik ul Rayees, Uterine Inflammation has effects on other parts of the body. Its effect can be seen on the stomach causing pain in epigastric region, indigestion, hiccups, weak stomach.

According to Abu bakar Mohammed Bin zakariya Razi, kitab al havi volume 9. Inflammation may occur in the whole uterus, fundus, cervix or adnexal organs. The symptoms may be Joint Pains, palpitations, Fever, Feeling of heaviness in pelvis, inner thighs, Chilling hands and feet, Sweating and weak pulse.^[3]

Investigations:

1. Complete Blood Picture to rule out the presence of Infection with increase Leucocyte count.
2. ESR levels are also measured which are raised during Infections.
3. C- Reactive Protein which is increased in inflammatory conditions
4. Blood Urea and serum electrolytes
5. Cervical and high Vaginal swab for aerobics and anerobic bacteria detection. PCR staining for Chlamydia, Immunofluorescence test for IgM and IgG antibodies is useful
6. Ultrasonography to check for Tubo ovarian masses
7. CT scan may also be advised to rule out the pattern or spread of the disease.^[1]

Treatment:

Treatment should be started as soon as possible, In susceptible cases where NAAT reports are awaited treatment based on suspicion should be initiated.

Most patients of PID are treated as Outpatients.^[9]

Indication for hospitalization includes Pregnancy, Failed Outpatient treatment, High grade fever with nausea and vomiting, pelvic abscess and need for surgical intervention.^[8]

The recommended Antibiotic therapy according to CDC guidelines is as follows.^[14]

Ceftriaxone at 500 mg IM in a single dose (for persons weighing ≥ 150 kg, administer 1 g of ceftriaxone)
PLUS

Doxycycline at 100 mg PO BID for 14 days WITH metronidazole at 500 mg PO BID for 14 days
OR

Cefoxitin at 2 g IM in a single dose and probenecid at 1 g PO administered concurrently in a single dose
PLUS

Doxycycline at 100 mg PO BID for 14 days WITH metronidazole at 500 mg PO BID for 14 days
OR

Other parenteral third-generation cephalosporin (eg, ceftizoxime, cefotaxime) PLUS

Doxycycline at 100 mg PO BID for 14 days WITH metronidazole at 500 mg PO BID for 14 days

One of the recommended parenteral treatment regimens for pelvic inflammatory disease is

Ceftriaxone 1 g IV every 24 hours PLUS

Doxycycline at 100 mg PO or IV every 12 hours PLUS

Metronidazole at 500 mg PO or IV every 12 hours.^[14]

In **Unani system of medicine**, based on assessment of Mizaj of the condition, The Single drugs are chosen with Muhallil (Resolvent), Mubarrid (cooling),

Mufateh (Deobstruent) and Musakin (Analgesics), Mudir-e-Haid (emmenagogue), Dafi'-e-Ufoonat (antimicrobial) and Muqawwi-e-Rahim (uterine tonic) properties.

Treatment includes Ilaj-bil-Ghiza (dietotherapy), Ilaj-bil-Dawa (pharmacotherapy) and Ilaj-bil-Tadbeer (regimental therapy) such as Hijama (cupping), Fasd (venesection) and other appropriate procedures depending on the patient's temperament and disease stage.

The drugs used are Maku (Solanum Nigrum), Kasni (chichorium inflbus), Brinjasif(Achillea Milleform), Baboona (Matricaria Chamomilla) or their combinations.^[10]

The compound drugs which work in PID includes Majune Dabidul ward, Arq e Maku, Arq e Kasni, Arq Brinjasif and Majun e Najah.^{[5][9]}

Regimental Therapies includes the Venesection of Basilic Vein followed by venesection of Saphenous vein,

Abzan or Sitz bath of Lukewarm decoction of Medicinal herbs such as Methi (Trigonella foenum-graceum) and Baboona (Matricaria Chamomilia) can be used.

In uncomplicated PID powder of Tikh e katan (Linum Usitatissimum) and Isapghol(Plantago Ovata) husk with 5ml honey could be given as Vaginal pessary for 14 days.^[13]

Complications:

According to PEACH trial during 3 years follow up after PID diagnosis 0.6 % Women developed an ectopic pregnancy, 18% developed infertility, 29% Reported chronic pelvic pain.^[15]

Differential Diagnosis:

1. Adnexal tumors
2. Appendicitis
3. Ectopic Pregnancies
4. Endometriosis
5. Interstitial Cystitis
6. Ovarian cysts
7. Ovarian tumor
8. Traumatic Injury.[8][1]

In Unani Clinical practice diagnosis is based on assessment of dominance of humours, Sign and symptoms such as Pain, Difficulty in defaecation, pulse and skin temperature rather than laboratory findings.

Conclusion:

PID is one of the common ailments that many women suffer from in the reproductive age group. It can be easily diagnosed and treated. Early detection helps in the prevention of long-term complications such as chronic pelvic pain, Ectopic pregnancies and infertility.

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