

EFFECT OF CERTAIN INDIGENOUS MEDICATIONS IN THE MANAGEMENT OF (*PITTALA YONIVYAPATH*) PELVIC INFLAMMATORY DISEASE

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Article Received on
17 Nov. 2016,

Revised on 06 Dec. 2016,
Accepted on 27 Dec. 2016

DOI: 10.20959/wjpr20171-7640

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ABSTRACT

Context: Pelvic Inflammatory Disease is a spectrum of symptoms which are defined as ascending, often recurring infections of female genital tract, which involves uterus and adnexae. Among the various *Yoniroga* (diseases of reproductive tract) mentioned in Ayurveda, based upon the similarity in clinical presentations and complications, *Pittala Yonivyapat* can be correlated with the Pelvic Inflammatory Disease. This disease (PID) requires an extensive management as the untreated or unsuccessfully treated women may develop serious complications and even adequately treated women are at higher risk of its recurrence. **Aim:** To evaluate the therapeutic effect of certain Ayurvedic indigenous drugs in Pelvic Inflammatory Disease.

Materials and methods: In a single blind clinical study, 14 patients

diagnosed with PID were given local treatment in the form of *Yoni Parisheka* with *Dashamula Kashaya* (300 ml) and *Yoni Kalkadharana* with *Lodhradi Kalka Choorna* (15 g) for initial 7 days after the cessation of menstrual period, followed by oral therapy with *Shigruwadi Guggulu* capsules (1g) tid, *Guggulu Tiktaka Kashaya* 30 ml bd, and a combination of *Pushyanuga Choorna* (5 g), *Amritha Satwa* (1 g) and *Trivanga Bhasma* (125 mg) bd with *Tandulodaka* and honey as *Anupana* were given for 45 days. **Result:** A

statistically significant reduction were seen in the signs and symptoms of PID such as lower abdominal tenderness ($p < 0.001$), cervical motion tenderness ($p < 0.001$), lower abdomen pain ($p < 0.001$), backache ($p = 0.003$), vaginal congestion ($p = 0.047$), cervical congestion ($p < 0.001$), vaginal discharges ($p = 0.003$), microbial load ($p < 0.001$). **Conclusion:** PID can be efficiently managed by following extensive Ayurvedic treatment by integrating both internal and local Ayurvedic medications.

KEYWORDS: *Pittala Yonivyapath*, Pelvic inflammatory disease, *Yoniroga*.

INTRODUCTION

Pelvic Inflammatory disease is defined as inflammation and infection of upper genital tract in women involving the fallopian tubes, ovaries and surrounding structures. It is commonly caused by ascent of micro organisms from the female lower genital tract. It is very commonly encountered in clinical practice, difficult to eradicate and often associated with serious sequelae like infertility chronic pelvic pain etc. Among the sexually active women suffering from PID, 20% suffer from infertility 9% ectopic pregnancy, 18% of women suffer from chronic pelvic pain.^[1] PID presents with lower abdominal pain, dyspareunia, menstrual irregularity, dysmenorrhea, cervical discharge and fever.

According to Ayurveda, inflammatory pathologies take place with the involvement of *Pitta*, as inflammation or *Paaka* is the inherent karma of *Pitta*. So PID has been correlated to the *Pittapradhana Yonivyapath*. Different symptoms like *Shroni Vamkshana Prushta Vedana* (lower backache ache), *Vasthi* and *Kukshi Gurutwam* (heaviness of lower abdomen) *Gramyadharme Ruja* (dyspareunia), *Bhrusha*, *Ushna*, *Kunapagandhi Yonisrava* (copious vaginal/ cervical discharges due to inflammation and infection of lower genital tract), *Daaha*, *Paka*, *Osha*, *Shoona* (inflammatory signs such as redness, local rise in temperature and congestive changes of cervix or vaginal canal) mentioned in the context of *Pittala Yonivyapath*^[2] can be related to the symptoms of PID. *Sparshakshamatwa* can be correlated to the lower abdominal tenderness, cervical motion tenderness, adnexal/forneceal tenderness or the uterine tenderness which can be elicited in PID. Modern management of PID consists of administration of antibiotics or surgical management in emergency conditions or if oral management fails.^[3] However the most important characteristic of PID is its difficulty to eradicate, repeated remissions and exacerbations. PID requires an extensive management in the form of local and internal treatments.

According to Ayurveda, *Samanya Chikitsa* of *Pittala Yonivyapat* is said to be *Shodhana Chikitsa*, *Sthanika Chikitsa* like *Uttara Basti*, *Abhyanga*, *Parisheka*, *Pichu* etc. Owing to the deep rooted nature of the disease and high recurrence rate, a combination of oral and local treatments are considered in this study. The main aim of the treatment is *Vata Pitta Shamana*, *Vedana Sthapana*, *Yonishodhana* and *Vranaropana*. Since PID is a major issue in the field of gynecology, this study has been carried out to find out an effective Ayurvedic treatment protocol.

MATERIALS AND METHODS

Source of data

14 patients diagnosed as pelvic inflammatory disease fulfilling the inclusion criteria were selected from the OPD and IPD of S.D.M. Ayurveda Hospital, Udupi.

Source of drugs

The required drugs for the study were procured from the S.D.M. Pharmacy, Udupi.

Study design

It was a single blind clinical study with pre test and post test design. A special proforma was prepared with all the clinical manifestations, assessment criteria and investigation findings as mentioned in the classics and allied sciences. The parameters of the signs and symptoms were scored on the basis of standard method of statistical analysis.

Intervention

Sthanika (Local) treatment (Table 1) was started soon after the cessation of menstrual period. *Yoni Parisheka* (Vaginal douche) followed by *Yoni Kalka Dharana* (Vaginal suppository) were given for 7 consecutive days. Thereafter oral medications (Table 2) were given for a period of 45 days.

Table 1: Local treatment given for the patients.

<i>Sthanika chikitsa</i>	Drug	Form	Quantity	Duration
<i>Yoni Parisheka</i> (Vaginal douche)	<i>Dashamula Kashaya</i>	<i>Kashaya</i>	300 ml	20 min
<i>Yoni Kalkadharana</i> (Vaginal suppository)	<i>Lodhradi churna</i> (<i>Lodhra</i> , <i>Nimba</i> , <i>Vata</i> , <i>Ashwatha</i> , <i>Udumbara</i>)	<i>Kalka</i>	15gm	2 hours

Table 2: Oral therapy advised for the patients.

Drug	Ingredients	Form	Dosage	Anupana
<i>Shigruwadi Guggulu capsules</i>	<i>Triphala Guggulu, Gandhaka Rasayana, Shigrumoola Twak</i>	Capsule	1 g thrice daily	Warm water
<i>Guggulu Tikthaka Kashaya</i>	Drugs used in <i>Guggulu Tikthaka Ghrita</i> , made into <i>Kashaya</i> form	<i>Kashaya</i>	30 ml twice daily	Warm water
<i>Pushyanugadi Choorna</i>	<i>Pushyanuga Choorna, Amritha Satwa, Trivanga Bhasma</i>	<i>Choorna</i>	10 g twice daily	<i>Tandulodaka</i> (rice washed water) and honey

Data analysis

Statistical analysis of the study was carried out by obtaining the frequency, percentage, mean, standard deviation and standard errors for different parameters. The statistical significance of the difference between the means of various study parameters were derived using paired “t” test.

Inclusion criteria

- Married female patients within the age group of 20-50 yrs
- Patients with symptoms of vaginitis / cervicitis / endometritis / oophoritis with mucopurulent vaginal discharges
- Diagnosed cases of chronic P.I.D.
- Patients with irregular menstruation, spotting due to P.I.D
- Patients with deep seated dyspareunia, post coital pain or discomfort due to P.I.D

Exclusion criteria

- Pregnancy
- Acute P.I.D, peritonitis, endometriosis/chocolate cyst, reproductive malignancies, prolapsed uterus
- P.I.D associated with tubercular infections, diabetes, senility and menopause.
- Patients with exclusive vulvitis and bartholinitis

Assessment criteria

The parameters such as lower abdominal pain, back ache, menstrual irregularity, dysmenorrhea, vaginal discharges, vulval congestion, vaginal congestion, cervical

congestion, lower abdominal tenderness, cervical motion tenderness, uterine tenderness, adnexal tenderness and microbial load of the vagina were taken into consideration for the analysis of the effect of the therapy

Investigations

- High vaginal swab microbial load analysis

Duration of the Study

Total duration of the study was for 45 days. Follow up was done at the end of 15 days, 30 days and 45 days of oral drug administration.

OBSERVATION AND RESULTS

Subjective parameters such as backache and lower abdomen pain were markedly reduced showing a statistically significant result. Dysmenorrhoea was also significantly reduced. Menstrual irregularity also had encouraging result though not significant. Lower abdominal tenderness, cervical motion tenderness, cervical motion tenderness were significantly relieved. (Table 3)

Table 3: Effect of treatment on subjective parameters.

Mean of BT	Mean of AT	d	paired "t" test					
			SD	SE	T	P	Df	
Lower abdominal pain								
2.071	AT 1	1.429	0.643	0.997	0.267	4.837	<0.001	13
2.071	AT 2	0.929	1.143	0.616	0.165	5.551	<0.001	13
2.071	AT 3	0.357	1.714	0.497	0.244	7.019	<0.001	13
Back ache								
1.429	AT 1	0.929	0.500	1.072	0.286	2.876	=0.013	13
1.429	AT 2	0.857	0.572	0.864	0.231	4.163	= 0.001	13
1.429	AT 3	0.570	0.859	0.646	0.173	3.710	= 0.003	13
Dysmenorrhoea								
1.714	AT	1.071	0.643	0.616	0.165	2.590	= 0.022	13
Abdominal tenderness								
2.143	AT 1	1.357	0.786	0.579	0.155	5.078	<0.001	13
2.143	AT 2	0.571	1.571	0.514	0.137	11.449	<0.001	13
2.143	AT 3	0.286	1.857	0.663	0.177	10.481	<0.001	13
Cervical motion tenderness								
2.000	AT 1	1.071	0.929	0.475	0.127	7.320	<0.001	13
2.000	AT 2	0.357	1.643	0.497	0.133	12.362	<0.001	13
2.000	AT 3	0.0714	1.929	0.475	0.127	15.203	<0.001	13
Adnexal tenderness								
1.857	AT 1	1.214	0.643	0.633	0.169	3.798	=0.002	13
1.857	AT 2	0.571	1.286	0.611	0.163	7.870	<0.001	13

1.857	AT 3	0.214	1.643	0.497	0.133	12.362	<0.001	13
Uterine tenderness								
1.500	AT 1	0.786	0.714	0.611	0.163	4.372	<0.001	13
1.500	AT 2	0.214	1.286	0.611	0.163	7.870	<0.001	13
1.500	AT 3	0.0714	1.429	0.646	0.173	8.272	<0.001	13

In the objective parameters, vulval congestion showed moderate relief while vaginal congestion, cervical congestion, vaginal discharges, microbial load showed statistically significant result. (Table 4)

Table 4: Effect of treatment on objective parameters.

Mean of BT	Mean of AT	D	Paired "t" test					
			SD	SE	T	P	Df	
Vaginal discharge								
1.357	AT 1	0.643	0.714	0.745	0.199	3.238	= 0.006	13
1.357	AT 2	0.500	0.857	0.650	0.174	3.379	=0.005	13
1.357	AT 3	0.214	1.143	0.426	0.114	3.663	=0.003	13
Vulval congestion								
0.429	AT 1	0.214	0.214	0.426	0.114	1.883	= 0.082	13
0.429	AT 2	0.214	0.214	0.426	0.114	1.883	= 0.082	13
0.429	AT 3	0.143	0.286	0.611	0.163	1.749	= 0.104	13
Vaginal congestion								
0.571	AT 1	0.286	0.286	0.469	0.125	2.280	=0.040	13
0.571	AT 2	0.214	0.357	0.633	0.169	2.110	=0.055	13
0.571	AT 3	0.0714	0.500	0.855	0.228	2.188	= 0.047	13
Cervical congestion								
2.500	AT 1	1.643	0.857	0.363	0.0971	8.832	<0.001	13
2.500	AT 2	1.214	1.286	0.469	0.125	10.262	<0.001	13
2.500	AT 3	0.643	1.857	0.663	0.177	10.481	<0.001	13
Microbial load								
2.357	AT	1.429	0.929	0.730	0.195	4.759	< 0.001	13

DISCUSSION

Pain

Udara Shoola, Vasti Gurutva, Kukshi Gurutva can be attributed to the *Vata Kopa*, because pain is the characteristic feature of *Vata* vitiation. Lower abdominal pain and back ache have shown significant relief. These effects can be attributed to the *Vata Shamana* achieved by the *Vatahara* property of majority of the drugs. The inhibitory effect of *Shigrumula Twak* over the CNS and the neurotransmitters might have helped in the control of pain.^[4] *Yoni Parisheka* with warm *Kashaya* has local *Swedana* action, improving the local circulation This improves the host response to congestion and infection. These effects must have helped in improving the generalized pain symptoms. When congestion reduces, it will reduce the pressure over the

nerves and this is probably the reason behind the improvement in back ache and lower abdominal pain.

Dysmenorrhea

There was no significant effect over dysmenorrhea. As dysmenorrhea is a result of longstanding congestion, complete relief in congestion may only produce remarkable changes in dysmenorrhea. Complete reversal of congestion would require treatment for a longer duration.

Vaginal Discharges

Vaginal discharges are the result of accumulation of fluid in the extravascular space, as a result of tissue response to microbes. The combined effect of local and systemic drugs has decreased the inflammation.

Tenderness

Cervical motion tenderness, adnexal tenderness and uterine tenderness showed significant improvement. Tenderness or *Sparshaakshamatwa* can be attributed to the *Pitta* and *Vata Dosh*. *Vatapittahara*, *Shothahara*, *Vranaropana*, *Vedanahara* (anti inflammatory, analgesic) properties of the drugs efficiently reduced the tenderness.

Congestion

Congestion is the initial response of the tissues to inflammation. *Rakta Shodhaka*, *Shothagna* along with *Swedana* effect of Local therapy must have primarily helped in bringing about the change by improving microcirculation and thereby reducing the stagnation of the blood.

Microbial load

The bacterial colonies in the vaginal swab were predominantly identified as staphylococcus species. Those specimens in which two species were identified before the treatment were reduced to single predominant species after treatment. The number of colonies were significantly reduced in majority of the swabs after treatment due to the anti microbial action of drugs in *Dashamula Kashaya* and *Lodhradi Kalka*. Also, the *Rasayana* effect of the drugs like *Triphala* and *Gandhaka Rasayana* help in the immunological modification in the affected tissues and that may bring back the microbiological balance. *Shothahara* property reduces the inflammation and help in tissue repair. *Krimighna*, antifungal, antibacterial properties of the drugs help in reducing the microbial growth.

The integrated action of the indigenous drugs both locally and orally have helped in bringing about significant changes (Table 5). Mainly the anti inflammatory, antibacterial, antiseptic, antipyretic, analgesic, *Vranaropana*, *Krimighna*, *Shulaprashamana*, *Garbhashaya Shothahara*, *Vatashamana*, *Pittahara* properties of the trial drugs, efficiently reduced the congestion, pain, infection etc thereby overcoming the PID.

Table 5: Properties and actions of different drugs used in this study

Sl no.	Drugs	Karma ^[5,6]	Pharmacological action
1.	<i>Dashamula</i>	<i>Shothaghna, Jwaraghna, Shula Prashamana, Mutrala, Vrana Ropana, Vatashamana</i>	Anti inflammatory, Antibacterial Anti pyretic, Spasmolytic, Uterine Stimulant
2.	<i>Lodhradi Kalka (Lodhra, Nimba, Vata, Ashwatha, Udumbara)</i>	<i>Jwaraghna, Vranaropana, Stambhana, Raktasodhaka, Kandughna, Garbhashaya Shothahara</i>	Anti inflammatory, Anti septic, Vaginal disinfectant, Anti microbial, Anti fungal, Anti viral, Anti bacterial, Anti leucorrhoeal, Tocolytic
3.	<i>Pushyanugadi Churna (Pushyanuga churna, Trivanga Bhasma, Amruta Satwa)</i>	<i>Vrana Ropana, Krimighna, Rakta Shodhaka, Pittaghna, Artava Janana, Shothaghna Pachana, Vedanastapana, Rasayana, Garbhashaya Shodhaka, Pradarahara, Balya, Deepana, Jwarahara</i>	Immune stimulant, Amoebicidal Diuretic, Anti inflammatory, Anti bacterial, Anti spasmodic, Uterine stimulant, Anti oxidant, Anti pyretic, Analgesic, Anti ulcerogenic, Antiseptic, Anti helmenthic
4.	<i>Guggulu Tiktaka Kashaya</i>	<i>Kapha Vata Shamana, Vedanasthapana, Krimighna, Shothghna, Vranaropana, Balya</i>	Anti inflammatory, Analgesic, Wound healing
5.	<i>Shigruvadi Capsule (Triphala Guggulu, Gandhaka Rasayana, Shigrumula Twak)</i>	<i>Shothahara, Krimighna, Vedanasthapana, Rasayana</i>	Anti Oxidant, Anti Allergic, Anti Inflammatory, Antibacterial, Free Radical Scavenging, Antifungal, Analgesic, Immunomodulator, Anti Inflammatory, Antipyretic, Antibacterial, Wound Healing, Antistress, Chemoprotective.

Sthanika chikitsa

Drugs gain entry into the systemic circulation through the blood vessels of lamina propria. Vaginal canal is richly supplied by arterial and venous plexus and this property makes it an ideal route of drug administration. Moreover, it bypasses portal circulation, increasing the bio availability of the drug. The existence of direct local transport from the vagina to the uterus, termed the 'first uterine pass effect' also support the absorption of drugs.^[7]

Yoniparisheka with lukewarm *Kashaya* does *Vata Shamana*, *Vedana Sthapana* and promote circulation, which helps in the reduction of congestion which in turn reduces the overall pain and tenderness in the pelvis. The cleansing effect created by *Parisheka* and the antiseptic properties of the drugs are responsible for the reduction in the quantity of vaginal discharges. The anti septic, anti inflammatory and healing property of the *Lodhradi Kalka* may have helped in the healing of the local tissue injury. The *Kashaya Rasa* and *Sheeta Veerya* of these drugs help in the *Pitta shamana* and *Vranaropana*.

CONCLUSION

The study has shown fruitful results over the pain related signs and symptoms, vaginal discharges, congestive changes of cervix and vaginal canal and also on the vaginal microbial load. PID can be managed in Ayurveda by following an extensive treatment protocol by oral and local therapy, thereby its complications and recurrence can be curbed effectively.

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