Endometriosis an Ayurvedic View

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ABSTRACT:

Endometriosis is a chronic estrogen dependent condition characterized by the ectopic implantation of functional tissue lining of uterus. The exact cause of endometriosis is not detected yet even though there are some theories which explain the pathogenesis of endometriosis. Retrograde menstruation and Coelomic metaplasia theories are included under this. Based on the site of appearance classification of endometriosis can be done as pelvic, extra pelvic and remote. Appearance of endometrial tissue in myometrium is termed as adenomyosis and endometriotic deep lesions in ovary is Endometrioma. The risk factor for aggravating endometriosis is cyclical hormonal changes especially estrogen. Ayurveda does not name endometriosis as a separate disease title. In Ayurveda the diseases related with genital tract is discussed under yoniroga. Brihatrayee and laghutrayee describe 20 yoni roga under various dosha vitiation. Due to the peculiar characteristic of pain, generally endometriosis is taken under vatika yoni vyapath. Even though vata is predominant, pitha and kapha dosha are also involved in various stages. Retrograde flow of menstrual blood, genetic factors, lymphatic and vascular spread are considered as the causative factors. Nidana of endometriosis include mitha yahara, vihara, arthava dusti, bija dushti, use of apadravya (iatrogenic causes) and daiva (genetic or chromosomal factors). Various type pain and infertility are the main clinical features of endometriosis. Pain is due to increased vata in kadee desa. Through the study the Nidana of endometriosis is analyzed and compared with latest theories. Endometriosis is not considered as a life threatening disease it is a life altering disease that require timely diagnosis and treatment. Currently there is no universally acceptable treatment protocol for endometriosis is available.

Key word: Endometriosis, Nidana, vatika yoni vyapath

INTRODUCTION

Endometriosis is an aggressive, progressive and invasive disease occurring commonly in reproductive group with higher prevalence in infertile women. It is a gynecological condition that affects 1 out of every 10 women of reproductive age. Endometriosis is the presence of functioning endometrium in sites other than uterine mucosa1. It is not a neoplastic condition, although malignant transformation can occur. Laparoscopic evaluation and histological confirmation is the golden standard of diagnosis of endometriosis. Endometrioma or chocolate cyst can be diagnosed with ultrasonography. According to WHO Endometriosis affects roughly 10-15%2 of reproductive age women, and it is a chronic...
disease associated with painful periods, painful intercourse, chronic pelvic pain, low back ache, and sometimes abnormal uterine bleeding. Early diagnosis and treatment of endometriosis is very effective in the management of endometriosis. Endometriosis can be classified based on the developing site, ie, abdominal, extra abdominal and remote 3. Another classification is endometriosis interna or adenomyosis, were the presence of functioning endometrium is situated in the myometrium and endometriosis externa were, endometrial tissues founds other than uterus. Cyclical hormones especially ovarian steroids estrogen and progesterone stimulate the condition but continuous hormone suppress it.

MATERIALS AND METHODS

Literary review of endometriosis and diseases having symptoms similar to endometriosis from Ayurvedic classics are identified and causative factors of these diseases are analyzed.

**Etiology of endometriosis**

Etiology refers to cause or origin of a disease. In endometriosis, the exact cause of origin is not clear but the condition is associated with the following predisposing factors.

A) **Family History**

It is suggested that the risk of endometriosis is higher in women whose mothers and sisters have the disease and that the disease may be more severe in women with a family history. Recurrence rate was found higher in patients with a positive family history of endometriosis4.

B) **Social class and Race** - It was found commoner in women who marry late and voluntarily use contraceptive for quite some time. According to a systematic review and meta-analysis, Black woman are only about half as likely to be diagnosed with endometriosis compared to white women5. Prevalence of endometriosis appears to be influenced by race or ethnicity.

C) **Menstrual and Reproductive Factors** - It grows during reproductive period with ovarian function. The condition ceases to function during pregnancy. Recent epidemiological studies has suggested that women with early menarche and short and heavy menstrual cycles are at higher risk. One of the theories of causes associated with endometriosis is retrograde menstrual flow or flow that moves backward. Conditions that can result in retrograde menstrual flow include:-

- Increased estrogen production
- Uterine growths like fibroids or polyp
- Structural abnormality of uterus, cervix or vagina
- Asynchronous uterine contractions

D) **Sterility and Infertility** - Sterility is a common symptom of endometriosis. Endometriosis is considered one of the three major causes of Infertility. According to the American Society for Reproductive Medicine, endometriosis can be found in 24 to 50 % of women who experience infertility. How it affects fertility is not clearly understood. It is thought that scar tissue from endometriosis can impair the release of the egg from the ovary and subsequent pick up by the fallopian tube. Other mechanisms may include changes in pelvic environment that results in impaired implantation of the fertilized egg ie. Distorted anatomy of the pelvis, adhesions, scarred fallopian tubes, inflammation of the pelvic structures, changes in hormonal environment of the eggs and altered egg quality.

E) **Immunological factors** - A weak immune system less recognize the misplaced endometrial tissue. The scattered ectopic tissue is left to grow in abnormal sites resulting in lesions, inflammation and scarring.

F) **Abdominal surgery** - Mainly Caesarean section, Hysterectomy or previous operations in uterus may misplace endometrial tissue leading to endometriosis unless identified and destroyed by immune system

**Theories related with the pathogenesis**

Pathogenesis of endometriosis is still not clear. There are some theories which gives explanations. Like

1. Sampson’s theory (retrograde menstruation theory)6

   Retrograde flow of menstrual blood through the uterine tube during menstruation. Endometrial fragments get implanted in the peritoneal surface of the pelvic organs. Cyclic growth and shedding of endometrium occur due to influence of oestrogen.

2. Coelomic metaplasia (Mayer and Ivan off) 7

   Chronic irritation of the peritoneal tissue in pelvis by the menstrual blood may cause Coelomic metaplasia, which results endometriosis. Coelomic epithelium retains the ability for multi potential development.

3. Direct implantation theory 8

   Endometrial tissues starts to grow in susceptible individual when implanted in the new site. Iatrogenic dissemination explain the development of endometric implants at the scar tissue.

4. Lymphatic and vascular theory 9

   Normal endometrium metastasis the pelvic lymph node through the draining lymphatic channel of uterus.

5. Genetic and immunological factor10

   There is abnormalities of humoral and cellular component,
which is various cytokines and growth factors involved in the pathogenesis.

**Pathology**
The endometrial tissues which consist stroma and glands cyclically undergo changes, proliferative changes are more evident and secretory changes are conspicuously absent. In ovary the periodical shed blood got encysted and the cyst becomes tens and ruptures. Menstrual blood is irritant to tissue, tissue scaring and tissue reaction occurs and it leads to fibrosis. Fibrosis leads to adhesion and puckering of peritoneum.

**Sites of endometriosis**
Endometriosis is reported in uterine ligaments, rectovaginal septum, pelvic peritoneum, laparotomy scar, vagina, umbilicus, hernia sacs, urinary tract, large and small intestine, pleura, diaphragm etc. Table 1

**Clinical features**
Pain and infertility are the major clinical features. The pain may vary type. It include dysmenorrhea, dyspareunia, and deep pelvic pain. Lower abdomen pain may also present in various cases. The reason behind chronic pelvic pain are peritoneal inflammation, tissue necrosis, adhesion formation, nerve irritation, or due to the rupture of Endometrioma. Dysmenorrhea is progressively increasing and secondary, were pain started few days prior to menstruation, get worsened during menstruation and get relief after cessation of period. Abnormal uterine bleeding may occur in some cases, it may presented as menorrhagia, polymenorrhea, or epimenorrhea. There may be a few symptoms like urinary and rectal which include dysuria, haematuria, painful defecation, melena etc. if endometriosis is occur in surgical scar, cyclical pain and bleeding present.

**Ayurvedic view**
In Ayurvedic classics, any disease affecting the Garbhhasaya and associated reproductive structures is included under ‘Yonivyapath’. Acharyas have described common etiological factors for these yonirogas. While ruling out each of these factors, it very clearly coincides with most of the etiological causes specified for endometriosis. While analysing the concept of Tridosha, mainly vata dosha is involve in the etio-pathogenesis of yonirogas. Along with vata dosha pitta and kapha involved in different stages.

**Role of vata, pitha and kapha in yoni rogas**
Noticing the symptoms of endometriosis, pain is the most predominating symptom or various types of pain is the characteristic of endometriosis. According to Ayurvedic concepts pain is a characteristic feature of Vata. Acharya Vagbhata had clearly described that disorders of yoni or disease of yoni do not occur without vitiation of vata. In endometriosis vata carries endometrium to other site than uterine cavity like myometrium, ovary etc. The foreign endometrium cause inflammatory reactions in tissue site, where pitha and kapha dosha involved.

**Apana vayu and vyana vayu**
Pelvis and associated reproductive structures are the seat of apana vayu. It helps in all excretory activities like mala, mutra, shukra, arthava, garbhavanishkramana. Prakrita vata is responsible for all anulomana kriyas occurring in reproductive system. Arthava gets exhibited every month cyclically in women in accordance with prakrita apana vayu. Since all body functions are controlled by vyana vayu, normal functions of yoni and garbhasaya is taken over and arthava is expelled out by anulomana property of apana vayu.

The basic causative factors responsible for occurrence of all Yoni rogas can be compiled as such:-
1) Mithya ahara
2) Mithya vihara
3) Abnormal arthava
4) Bija dosha
5) Daiva
6) Use of apadravyas

**Mithya Ahara - Abnormal diet**
Anashana, Alpashana and Atyashana are included under Mithyahara. Anashana and Alpashana causes dhatukshaya and ill health which results in decreased pain threshold and increased infection. Dhatukshaya may cause vata vridhi due to its ruksha and khara gunas. In Malnutrition, there is no proper dhatuparinama. In endometriosis these may increase the pain and inflammation. A women with vataja prakruthi and consuming vatakara ahara vihara is more prone to endometriosis. The intake of excess katu and laghu ahara like leafy vegetables, rooksha and tikta ahara like fried meat, kashaya pradhana ahara like mudga in excess quantity also vitiates vata dosha. Atyadhika ahara and dushtabhujana causes formation of ama. Abhishyandi bhoojana and virudha ahara causes vitiation of doshas to localise in yoni. Inflammation and high oestrogen levels can make the symptoms worse. Selection of appropriate food helps in fighting inflammation and balance oestrogen.

Certain foods are advised to avoid in endometriosis

**A) Red meat** - It contains xenohormones, omega 6 fatty acids linked with high oestrogen and antibiotics, toxic to body.
B) Tran's fats - causes systemic inflammation, OMEGA 3 Fatty acids are recommended instead.
C) Processed foods - These foods contain additives ie pro-inflammatory ingredients like added sugar, saturated fat and trans fat. Pesticides in conventional meats, fruits and vegetables can cause inflammation.
D) Alcohol - turns to sugar and put stress on liver and increases inflammation.
E) Caffeine - Too much caffeine aggravates the digestive functions and creates inflammation.
F) Dairy products - Excessive use causes inflammation through hormones. Dairy products containing growth hormones and antibiotics worsens endometriotic symptoms
G) Soy products - As it is estrogenic, it can cause the uterus to thicken and trigger endometrial implants to grow.

Grains and gluten - Gluten is a protein found in grains including wheat, barley and rye. It acts as a glue which holds food together. It may cause hormonal imbalances and inflammation in organs. In a retrospective study conducted, Painful symptoms of endometriosis decrease after 12 months of gluten free diet

Mithya Vihara - Abnormal Mode Of Life
A) Excessive coitus - A weak, very young woman with ruksha sarira indulging in excessive coitus with a man of large sized penis is a main causative factor of yoniroga according to Acharya Susrutha.

In a study conducted to determine the association between sexual activity during menstruation and endometriosis, the occurrence of endometriosis in women who had sexual activities during menses was higher compared to those having non sexual activities. Thus it supports the retrograde menstrual theory sending endometrial tissue to abnormal sites increasing the risk of endometriosis. The retrograde menstrual theory is described under udavartha or dysmenorrhea, were 'rajaso gamanad oordwam indicat retrograde flow. Udavartha or dysmenorrhea is also a vata predominant condition where painful menstruation is the main clinical features.

B) Vegadharanam - Suppression of natural urges leads to vitiation of vata thereby worsening the symptoms.

C) Lack of sleep - “Ratri jagarana” a major cause of vata vitiation occurs in women due to shift duties as a part of career. It increases inflammation, causes insulin resistance thus increasing sensitivity to pain. It decreases the brain’s natural pain relieving chemicals such as Dopamine. The insomnia associated with the condition can result in disease progression and increased pain. The study states that ‘Treating Insomnia would reduce the negative outcomes related to the inflammatory and pain related aspects of endometriosis and would contribute to an improvement in mental health and daytime function.

D) Career and Travelling - In present era, career and travelling has become an important activity in woman's life. Continuous sitting and uneventful mode of travelling triggers vata vitiation obstructing the anuloma gathi of Apana vata.

Dushta Arhava

The word Arhava indicates female sex hormones, ovum and menstrual blood. Excreted menstrual blood is unctuous, scanty or excessive in amount. Following factors play a key role in the development of yonirogas

- Artava dushti - Passage of big clots, Heavy menstrual bleeding,
- Violation of 'Rajaswalacharya' - Intake of indigestive and fatty foods, Rigorous exercise in menstrual days may cause Apana vata vaigunya resulting in retrograde menstrual flow, a theory postulated in the development of endometriosis.

Beeda dosha

Genetic and chromosomal abnormalities may act as beeda dosha. The familial and genetic basis of endometriosis is significant in the above description of family history.

Daiva

Unknown or Idiopathic factors may come under this group.

Use of apadravyas – Use of artificial phallus or sex toys for coitus may cause implantation of endometrial tissue by apanavata vaigunya.

Manasika bhavas - Above all the role of manasika bhavas plays a significant role in the ethiopathogenesis of every disease. In many studies conducted, the somatization, depression, sensitivity and high levels of anxiety with a significant decline in quality of life were observed in women with endometriosis.

Samprapti

Vatakara ahara vihara in vata constitution participant results vata kopa. This vitiated vata in turn vitiate arhava. Next vitiated arhava is carried out to garbasaya by pratiloma gati, and it may deposit in various site. Vata kopa also cause vitiation in rakta, mamsa, medas etc.

Samprapti gataka involves

Dosha: vata vrudzi, Pitta kshaya kapha kshaya

Doshyam: rasam, raktam, arthava

Srotas: aravavaha srotas

Srotho dushti: vimarga gamanam
Diseases with similar symptoms
Vatiki yoni vyapath16: Vatiki yoni vyapath is occur due to the vitiation of vata. Nidana are similar to that of vata vridhi nidana like food and regimens which have rooksha, sheeta, khara and sookshma property. Various type of pain is the main clinical feature of Vatiki yoni vyapath. Aggravated vata in pelvic region cause acute pricking pain or pain in groin and flanks. Other features are stiffness, roughness, frothy- reddish black menstrual blood. Finally Appearance of gulma that can be taken as chocolate cyst or endometrioma in ovary. Bavamisra, Yogaratnakara and Madhava describe the major symptom as severe pain. Udavarta yoni vyapath19: Acharya Caraka describe that the nidana of udavarta is “rajaso gamanat oordwam”, due to the upward movement of rajas, the condition is occur due to the suppression of urges or functional disturbance or secondary to organic obstruction. So the main treatment line is bring vata in its own normal marga. The clinical feature of udavarta include painful expulsion of rajas or dysmenorrhea. Secondary dysmenorrhea is a classical sign of endometriosis.

Granthi: Endometrioma or chocolate cyst in ovary is a condition of granthi, where red tarry colour blood is the component along with endometrial tissue. Pitha, kapha and raktha dushti is involved in this condition.

Analysis of endometriosis based on doshas Table 2
Analysis of the dosha predominance of endometriosis shows vata is the main causative factor, associated with vata, pitha and kapha involved in different stages. So the conditions like vatiki and udavarta, granthi etc can be correlated with endometriosis.

DISCUSSION AND RESULTS
As per Ayurvedic classics it is not possible to name all the disease and no need of ashamed of this. Naming is adopted only for the easily distinguishing of the disease condition. It is better to analyse a disease based on the nidana panchaka. So identifying nidana or causative factor is very essential. Nidana are of two types, Samikrusha and viprakrushta nidana. Samikrusha nidana are direct causes and viprakrushta are indirect causes. Here sannikrushta nidana include suppression of natural urges, intake of vata vridhi ahara – vihara like that. Viprakrushta nidana is genetic or chromosomal factors. Aggravated vata vitiate arthava and due to the pratiloma gati of arthava endometriosis occurs. Pain is the major clinical features observed in endometriosis it is the cardinal feature of vata. Along with vata pitha and kapha dosha also involved in various stages. Here the involved srothas is arthava vaha srothas and vimarga gamana is the Srotho dushti lakshana. Along with arthava, rasa, raktha dhatu also vitiate in endometriosis. The appearance of classical gunshot lesion and collection of blood in ovary or endometrioma is occur due to this dhatu dushti. Clinical features of endometriosis is varying in different persons. In some ladies dysmenorrhea and dyspareunia is the predominant symptom where vata is the main dosha, in some cases menorrhagia is there, where pitta and vata dosha involved. In endometrioma kapha pitta dosha is more involved.

CONCLUSION
Endometriosis is a chronic disease which has no complete cure is available in any system of medicine. The clinical presentation can reduce using various treatment modalities. The ideal solution is possible only by the Prevention of these risk factors. It can be attained by promoting a healthy lifestyle including appropriate diet, mode of life and at same time maintaining a peaceful mind. So the etiological factors depending upon Aharaja, Viharaja,Vegadhara and Manasika doshas should be prevented on the basis of `Swasthachatushka' explained in our classics, which is the overall resolution in maintaining good health, free from all diseases. It is usually affect in reproductive age group and may leads to infertility. The number of endometriotic cases are increasing day by day. Ayurveda the science of health has a good role in management of endometriosis through both sodhana and samana technique.

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REFERENCE

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### Table 1

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<thead>
<tr>
<th>Abdominal</th>
<th>Extra abdominal</th>
<th>Remote</th>
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<tbody>
<tr>
<td>Ovaries</td>
<td>Scar of caesarean or other surgery</td>
<td>Lungs</td>
</tr>
<tr>
<td>Pelvic peritoneum</td>
<td>Umbilicus</td>
<td>Pleura</td>
</tr>
<tr>
<td>Pouch of Douglas</td>
<td>Vagina</td>
<td>Ureter</td>
</tr>
<tr>
<td>Appendix</td>
<td>Cervix</td>
<td>Kidney</td>
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<td>Fallopian tube</td>
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### Table 2 Analysis of endometriosis based on doshas

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Similar symptom in Ayurveda</th>
<th>Predominant <em>dosha</em></th>
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</thead>
<tbody>
<tr>
<td>Dysmenorrhea</td>
<td><em>Artava soola</em></td>
<td><em>Vata</em></td>
</tr>
<tr>
<td>Dyspareunia</td>
<td><em>Yoni soola, yoni toda, yoni bheda</em></td>
<td><em>Vata</em></td>
</tr>
<tr>
<td>Deep pelvic pain</td>
<td><em>Kadee soola</em></td>
<td><em>Vata</em></td>
</tr>
<tr>
<td>Infertility</td>
<td><em>Anapathyata, vandhya</em></td>
<td><em>Tridosha</em></td>
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