



ROLE OF ARTAVA VAHA SROTAS AND DEHA DOSHA IMBALANCES IN YONIVYAPAD AND ITS ASSOCIATION WITH ENDOMETRIOSIS

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Abstract

The texts of Ayurveda often provide a concise anatomical description of the human body in the *Sharira Sthana* section. According to the works of *Acharya Sushruta* and *Acharya Vagbhata*, the concept of *Srotasa* refers to the intricate channels inside the human body through which the circulation of "*Rasadi Poshya Dhatu*" takes place, facilitating the distribution of nourishment throughout the whole organism. *Acharya Sushruta* provided a description of an extra *Artavavaha Srotas*, consisting of two channels. These channels are rooted in the *Garbhashaya* (uterus) and *Artavavahi Dhamanis* (menstrual vessels). Ayurveda provides an extensive account of the *Artavavaha Srotas*, including its *Moolsthana* (root site), pathophysiology, clinical symptoms, and corresponding Ayurvedic interventions for care. In Ayurvedic literature, the various gynaecological problems have been comprehensively delineated and categorised as *Yoni Vyapads*. Twenty *yonivyapad* have been referenced in many classical works. The occurrence of dysmenorrhea has been seen to exhibit a correlation with *udavartini yonivyapad* in the context of Ayurveda. Dysmenorrhea, sometimes referred to as dysmenorrheal or menstrual cramps, is the experience of pain occurring in conjunction with the menstrual cycle. The issue often goes undiagnosed and receives inadequate treatment. This review mainly focuses on the role of *ArtavaVaha Srotas* and *Dosha* imbalances in *Yonivyapad*, specifically exploring its connection with endometriosis.

Keywords- Dysmenorrhea, Anatomical, *Yonivyapad*, Ayurvedic, Menstrual cycle, Endometriosis.

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1. Introduction

Yonivyapad, which accounts for around 70% of gynaecological issues, is often seen in the field of Gynaecology. The clinical symptoms of the condition have similarities to those of pelvic inflammatory disease, therefore suggesting a potential correlation. Sexually transmitted infections (STIs), particularly pelvic inflammatory disease (PID), pose a significant public health concern, particularly in developing nations, due to their widespread occurrence and the subsequent economic and social ramifications they entail.

The delayed implementation of treatment strategies for pelvic inflammatory disease (PID) has been associated with increased rates of adverse outcomes, such as miscarriage, persistent pelvic discomfort, sexually transmitted diseases (STDs), progressive organ damage, and long-term reproductive impairment.

Acharya Sushruta provided a description of an extra *Artavavaha Srotas*, consisting of two components [1]. The *Moolasthanas*, or primary sites, of both components are the *Garbhashaya* (uterus) and the *Artavavahi Dhamanis* (menstrual vessels). Ayurveda provides an extensive account of the *Artavavaha Srotas*, including its fundamental principles, pathophysiology, clinical manifestations, and corresponding Ayurvedic therapeutic approaches [2]. The *Artavavaha Srotas* is a physiological channel in Ayurveda that plays a significant role in the reproductive system. The *Artavavaha Srotas* has notable resemblances to the female reproductive system as elucidated in contemporary medical research.

In Ayurved, the various gynaecological problems have been extensively elucidated and categorised as *Yoni Vyapads*. Twenty *yonivyapad* have been referenced in many classical works. One of the conditions is known as *Udavartini Yoni Vyapad*. The primary clinical manifestation of *udavartini yonivyapad* is *rajah kricchrata*, which refers to dysmenorrhea, or the experience of painful menstruation [3]. In Ayurveda, there is a correlation between dysmenorrhea and *udavartini yonivyapad* [4]. Dysmenorrhea, sometimes referred to as dysmenorrhoeal or algomenorrhoea, is the experience of pain occurring in conjunction with the menstrual cycle. The issue often goes unrecognised and receives little attention in terms of diagnosis and treatment [5].

The preservation of health is significantly influenced by one's lifestyle. The rising occurrence of the illness may be attributed to several faulty lifestyle choices, including heightened intake of canned packaged foods, smoking, alcohol usage, elevated stress levels, insufficient physical activity, and irregular eating and sleeping patterns [6]. The

incidence rate of dysmenorrhea was found to be 70.2%. The majority of participants reported experiencing discomfort lasting for a duration of 1-2 days throughout the menstrual cycle. A total of 23.2% of the female individuals with dysmenorrhea reported experiencing discomfort lasting for a duration of 2-3 days [7]. Females with primary dysmenorrhea have heightened endometrial prostaglandin synthesis, leading to elevated uterine tone, and intensified, more frequent uterine contractions. Dysmenorrhea imposes a more substantial strain compared to other gynaecological complaints. According to the World Health Organisation (WHO), dysmenorrhea has been identified as the primary contributor to persistent pelvic discomfort [8].

2. Components of the Artavavaha Srotas

Ayurveda elucidates distinct structures or components of the *Artavavaha Srotas*, which have resemblance to the anatomical architecture of the female reproductive system [9]. In Ayurvedic literature, the term "*Yoni*" encompasses both the collective reproductive system as well as the organs within it [10]. The *Yoni* has a structural resemblance to that of a conch shell, characterised by a wider opening at the beginning, a narrowing or kinking in the middle, and a subsequent widening towards the end. The composition of the entity in question is said to consist of three distinct *Avartas* [3]. The term "*Prathamavarta*" refers to the anatomical structures of the vagina and its associated components. "*Dwitiyavarta*" encompasses the cervix and its associated structures. Lastly, "*Tritiyavarta*" encompasses the uterus and its appendages.

Dhamani, or blood vessels, have immense significance as they serve as the primary source of sustenance for the *Artavavaha Srotas* [11]. Without the presence of *Dhamani*, the process of menstruation cannot occur, hence hindering the possibility of conception [12]. In the description of *Artavavaha Srotas* by *Acharya Sushruta*, *Dhamani* is identified as a significant *Moola* (root) for the *Srotas* (channels). Females possess two *Dhamanis*, namely *Artava* and *Stanya*, which are analogous to the conduits responsible for transporting *Shukra* in males [13]. *Artavavaha Dhamani* refers to the anatomical structure known as the fallopian tube, which serves the purpose of facilitating the transportation of the *Artava* (ovum) from the ovaries to the uterus during the monthly period. Additionally, it also accommodates the ovarian and uterine vessels [14].

Artava is emblematic of the primary and significant efforts undertaken by females. This phenomenon is characterised by a cyclical nature

and may be interpreted from several perspectives [15]. This action not only signifies the cyclical monthly discharge of blood from the vagina at a macroscopic level, but also signifies the hormonal fluctuations associated with the female reproductive system [16]. *Aartava* provides women with a heightened degree of specialisation in terms of physiological functions. The attainment of this physiological specialisation necessitates the presence of specialised anatomical structures [17]. The clinical significance of the *Aartava* is readily apparent, as it serves as a first inquiry during examinations and discussions pertaining to the female reproductive system. Specifically, the initial query often revolves on the characteristics and regularity of the monthly menstrual flow [18]. Haridwar et al. (2021) examined *Udavartini Yonivyapad*, which is identified as one of the twenty gynaecological illnesses documented in the ayurvedic classics. The condition is attributed to the exacerbation of *apana vata*, resulting in the upward displacement of menstrual blood and subsequent manifestation of dysmenorrhea [5]. Gulati et al. (2020) provided an elucidation of the various structures or components of the *Artavavaha Srotas*, which exhibit similarities to the anatomical structures of the female reproductive system. As to the findings of *Acharya Sushruta*, damage to the *Artavavaha Srotas* results in *Bandhytwa* (infertility), *Maithuna Asahishunta* (dyspareunia), and *Artava Naasha* (amenorrhea) [3].

Similar to how a river is cleansed via its continuous flow, women undergo purification with the monthly flow, which contributes to their reduced vulnerability to many illnesses [19]. Ayurveda strongly advocates adhering to certain regimens throughout both menstrual and post-menstrual phases. Noncompliance with these regimens is the primary factor contributing to a multitude of gynaecological and systemic ailments in women [20]. In addition to systemic disorders, there are twenty gynaecological diseases that are mentioned in classical texts as *Yonivyapad* [21]. These diseases are categorised as *Yoni Roga*, which refers to the anatomical components of *Artavavaha Srotas*. As to the findings of *Acharya Sushruta*, damage to the *Artavavaha Srotas* results in *Bandhytwa* (infertility), *Maithuna Asahishunta* (dyspareunia), and *Artava Naasha* (amenorrhea) [3].

Pratibha et al. (2014), studied several *srotas* have clear associations with contemporary scientific knowledge. For instance, both Ayurveda and contemporary science acknowledge the *annavaha srotas*, which refers to the gastrointestinal channel, as well as the *pranavaha srotas*, which pertains to

the respiratory airways. It is not possible to establish a correlation between some *srotas* and contemporary scientific principles. The *artavavaha srotas* and *udakavaha srotas* are responsible for transporting the monthly menstuum and clean water inside the body, respectively. The female reproductive system, often known as the female genital system, comprises both internal and exterior sex organs that play a vital role in human reproduction [22].

Artava Kshaya refers to a condition in which menstruation does not come at the expected time, is characterised by reduced amount, or is accompanied by pain and suffering [23]. According to *Acharya Charaka*, the drop in *Raja* leading to *Lohitkshaya* is attributed to the *Pitta Dushti* of *Asrika* [24]. On the other hand, *Vagbhata* suggests that the decrease in *Raja* is caused by the imbalances of both *Vata* and *Pitta*. According to *Madhava Nidana* and *Yogratnakara*, the condition is characterised by the loss of *Rakta* (blood) accompanied by a sense of burning [25]. In the context of *Madhokosha*, the depletion of blood is attributed to an extreme hemorrhagic condition. The primary clinical manifestation of (Cyst) is the presence of edoema or protrusion [24]. The term "*granthi*" refers to a distinct characteristic, namely a swelling that is either glandular or nodular in nature [26]. The concept of "*Granthi*" as described in Ayurvedic texts may be analogously related to Polycystic Ovary Syndrome (PCOS). According to *Sushruta* in *Nidanasthana*, the presence of imbalanced *Vata*, among other *Doshas*, disrupts the integrity of various bodily tissues such as *Mamsa* (muscles), *Rakta* (blood), and *Meda* (fat), coupled with *Kapha*. This imbalance leads to the development of circular, nodular, and raised formations known as *granthi* [27 - 28]. This review determines the Role of *ArtavaVaha Srotas* and *Dosha* imbalances in *Yonivyapad* and its association with endometriosis and to access the efficacy of Ayurvedic management in *Vataja Yoni Vyapad*.

3. General characteristics of Yonivyapad in women

The term "syndrome" is employed to characterise polycystic ovary syndrome (PCOS) due to its multifaceted nature, encompassing various factors and organs. Polycystic ovarian syndrome (PCOS) is a frequently seen diagnosis among women who report with infertility. The comprehensive exploration of all elements of Polycystic Ovary Syndrome (PCOS) remains incomplete. These include obesity, insulin resistance, irregular menstrual bleeding (often excessive), abnormal

menstrual periods and cycles, and anovulation (lack of ovum production).

➤ Anovulation is classified as a component of *Vandhya*, which is a condition associated with infertility [29].

➤ Obesity is a medical disorder known as *Sthoulya* [30].

➤ Acne and baldness have representing two distinct pathogenic processes.

➤ Hyperinsulinemia is implicated in the pathogenesis of type 2 Diabetes mellitus. Menstrual abnormalities, such as anovulation and obesity, are often seen symptoms that need careful attention and management [31].

The condition known as *Vataja Yonivyapad* has significant similarities to the medical condition of Endometriosis. Endometriosis is a benign gynaecological ailment characterised by the presence of functional endometrial tissue beyond the confines of the uterine cavity [32]. It is regarded as an intriguing and enigmatic condition. The prevalence of the condition is around 10%, however, the recognition of further instances is growing due to the use of diagnostic laparoscopy [33]. The prevalence of infertility is seen to be 20% among women experiencing difficulties in conceiving, whereas those with chronic pelvic pain (CPP) have a prevalence rate of 15% [34]. Endometriosis has been shown to have a correlation with infertility and dysmenorrhea, which is characterised by painful menstruation [33]. *Vataja Yonivyapad* has comparable clinical manifestations, including irregularities in the menstrual cycle and the presence of acute pain, among other symptoms [35].

4. General etiological factors of *Yonivyapad*

There is a significant need for increased understanding about the illness, the challenges experienced because of the prolapsed condition, preventative actions, and the potential effects after surgical intervention. A significant aspect of gynaecology is included within the domain of Ayurveda, under the classification of *Yonivyapath*. Acharyas have provided descriptions for each kind of prolapse, also known as *Yonigata bramsha*. *Yonivyapad* encompasses a comprehensive discussion of the many potential aetiologies, clinical manifestations, and therapeutic approaches associated with the condition. *Beeja Dosha* refers to the genetic factors behind the manifestation of an illness. *Beeja dosha* pertains to irregularities in the *artava* (ovum) and *shukra* (sperm), leading to atypical development of the female foetus's genital tract, such as the occurrence of *Suchi Mukhi* [36]. In contemporary medical literature, it has been observed that certain congenital malformations in

women, such as a pinhole opening in the cervix (known as pin hole), narrowing of the cervical canal due to the presence of septa, and imperforate hymen, might contribute to the experience of painful menstruation. This is mostly attributed to the challenges these defects provide in facilitating the flow of menstrual blood [37].

➤ *Mithyahara*- The consumption of meals in a manner that is detrimental to the body. Foods that are not consumed in accordance with the principles of *Ashtavidha Ahara Vidhi Viseshayatanani* and *Aahara Vidhi vidhan* may be classified as *mithya ahara*. *Mithya Ahara* encompasses erroneous dietary practises, one of which is *Adhyashana*, a term derived from Ayurveda that denotes the act of consuming food prior to the complete digestion of a previous meal. The adverse consequences of *Adhyashana* are depicted in several ancient literary works [9].

➤ *Vishamashana*- The practise of consuming a reduced amount of food while experiencing excessive hunger, consuming an increased amount of food when experiencing diminished appetite, and consuming either excessive or insufficient amounts of food when appetite is within normal range. Individuals who engage in frequent *Vishamashana* practise may experience a decrease in their disease resistance capacity, sometimes referred to as poor immunity [38].

➤ *Samashan*- The term refers to the consumption of a meal that consists of a combination of both healthy and harmful substances. The exacerbation of the three *Doshas* leads to the manifestation of *Nija vyadhis*.

➤ *Anashana*- The term "fasting" refers to the practise of abstaining from food consumption entirely. The aforementioned factors result in a decrease in physical strength, complexion, metabolic activity, and vitality, ultimately contributing to the development of ailments associated with the *Vata dosha* [20].

➤ *Artava Dushti*- When the *artava* lacks the *shuddha artava lakshanas*, it is referred to be *pradushta artava*. Furthermore, it is essential to examine the underlying factors contributing to the occurrence of *ashta artava dushtis*. The occurrence of these ailments is attributed to the imbalance of the three doshas, which not only impacts the amount but also the quality of the *artava*, leading to the experience of dysmenorrhea.

➤ *Daiva*- The aetiology of the condition remains uncertain or idiopathic. When a sickness manifests without any discernible aetiology, it is postulated to arise from *adharm* committed by the individual and *purvajanam krita papa karmas* (resulting from divine curses) [20].

5. Types of yonivyapad

The health of an individual is characterised by the presence of harmonised *Doshas* (physiological functions), well-regulated *Agni* (digestive capacity), appropriately developed *Dhatu*s (bodily tissues), efficient removal of waste materials, and a disposition characterised by cheerfulness. As previously stated in the field of Classics, women are afflicted with a variety of twenty *Yoni Rogas*.

One of the most significant aspects is *Karnini Yonivyapad*. Cervical erosion might be likened to the condition in terms of its indications and symptoms [39]. The prevalence of this particular illness ranges from 35% to 85% among women in their active reproductive years. Various types of *yonivyapad* according to *Charak Samhita*, *Susruta Samhita* and *Arogya Sangraha* (Table 1).

Table 1. Types of yonivyapad according to Charak Samhita, Susruta Samhita and Arogya Sangraha			
Sr.No.	Type	Cause	Characterization
Charak Samhita			
1.	<i>Vaatika yonivyapad</i>	excess of vata dosha	dryness, itching, and pain
2.	<i>Acharana yonivyapad</i> [40]	excessive walking	pain, burning sensation, and bleeding
3.	<i>Aticharana yonivyapad</i> [41]	excessive sexual intercourse	pain, burning sensation, and bleeding
4.	<i>Prakarana yonivyapad</i> [42]	excessive masturbation	pain, burning sensation, and bleeding
5.	<i>Udavartini yonivyapad</i>	prolapsed uterus	heaviness in the vagina, pain, and bleeding
6.	<i>Putraghni yonivyapad</i> [43]	a condition in which the fetus is killed in the womb	pain, bleeding, and a foul-smelling discharge
7.	<i>Antarmukhi yonivyapad</i> [44]	a condition in which the vagina is turned inwards	pain, bleeding, and a foul-smelling discharge
8.	<i>Suchimukhi yonivyapad</i> [45]	a condition in which the vagina is turned outwards	pain, bleeding, and a foul-smelling discharge
9.	<i>Shuska yonivyapad</i> [46]	dryness of the vagina	pain, burning sensation, and itching
10.	<i>Shandhiyoni yonivyapad</i> [47]	a condition in which the vagina is shrunken	pain, burning sensation, and itching
11.	<i>Mahayoni yonivyapad</i> [48]	a condition in which the vagina is enlarged	pain, burning sensation, and itching
Susruta Samhita			
12.	<i>Udavarta yonivyapad</i>	prolapsed uterus	heaviness in the vagina, pain, and bleeding
13.	<i>Bandhya yonivyapad</i> [49]	a condition in which the woman is unable to conceive	pain, bleeding, and a foul-smelling discharge
14.	<i>Vilupta yonivyapad</i> [50]	a condition in which the vagina is turned inwards	pain, bleeding, and a foul-smelling discharge
15.	<i>Parilupita yonivyapad</i> [29]	a condition in which the vagina is turned outwards	pain, bleeding, and a foul-smelling discharge
16.	<i>Vatala yonivyapad</i> [51]	excess of vata dosha	dryness, itching, and pain
Arogya Sangraha			
17.	<i>Vaatika yonivyapad</i> [52]	excess of vata dosha	dryness, itching, and pain
18.	<i>Paatika yonivyapad</i> [53]	excess of pitta dosha	redness, inflammation, and pain
19.	<i>Kaphaja yonivyapad</i>	excess of kapha dosha	heaviness, coldness, and pain

6. Causes of Yoni vyapad in women

There are many specific factors attributed to the occurrence of *Yoni vyapad*. The exacerbation of *vata* is caused by the consumption and frequent engagement in activities that are known to aggravate *vata*, as seen in women with a *vata* body constitution. Excessive consumption of foods and substances which cause oozing and serous effusion in the body and also other *kapha* aggravating foods and activities on regular basis by woman causes

aggravation of *kapha* which leads to *Yonivyapad* [54].

7. Pathophysiology of Yoni vyapad in women

The aetiology of dysmenorrhoea remains poorly elucidated however, the reason that has been found is attributed to the excessive release of prostaglandins from the endometrium of the uterus. Prostaglandin F2alpha (PGF-2a) and Prostaglandin PGF 2 enhance uterine tone and induce high-amplitude contractions of the uterus. Additionally,

there is a correlation between vasopressin and primary dysmenorrhea. Vasopressin has the ability to enhance uterine contractility and may induce ischemia discomfort as a result of its vasoconstrictive properties. The contractility of the uterus is shown to be more pronounced during the first two days of the menstrual cycle [55]. The

decline in progesterone levels before menstruation results in heightened synthesis of prostaglandins, hence initiating the occurrence of dysmenorrhea. Endometriosis and adenomyosis are prevalent aetiologies of secondary dysmenorrhea in premenopausal women (Fig 1).

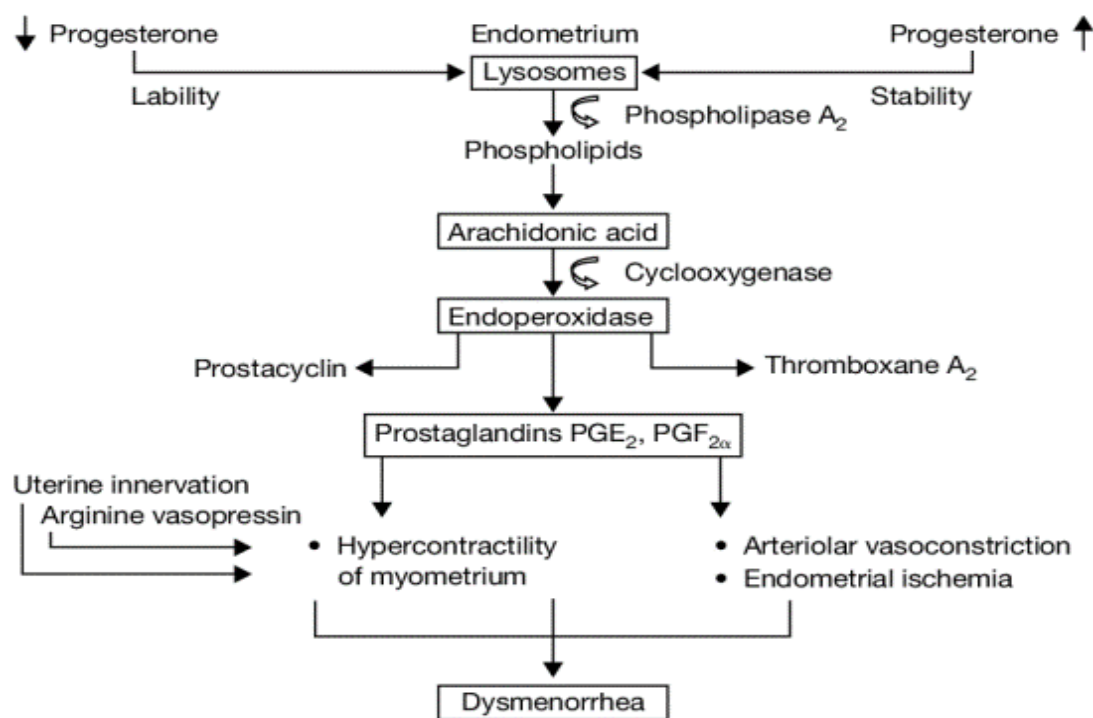


Fig 1. Pathophysiology of adolescent dysmenorrhea. [56]

Premenstrual syndrome (PMS) is a physiological and psychological disorder that impacts a woman's emotional well-being, physical health, and behavioural patterns on certain days of the menstrual cycle, often occurring in the premenstrual phase before to menstruation. Premenstrual syndrome (PMS) symptoms manifest during a timeframe of 5 to 11 days before the onset of menstruation, and generally subside at the commencement of menstruation. The aetiology of premenstrual syndrome (PMS) remains unclear. The concentrations of oestrogen and progesterone exhibit periodic fluctuations during the menstrual cycle. Elevated levels of these hormones have the potential to induce fluctuations in mood, heightened anxiety, increased irritability, and the onset of dysmenorrhea [57].

When a woman with a *vata prakriti* eats food and engages in behaviours that exacerbate *vata*, the *vata dosha* becomes worsened [58]. The exacerbated *vata dosha* infiltrates the female reproductive system, giving rise to distressing symptoms and resulting in *vatal yoni vyapat*. *Prakriti* engages in the consumption of sustenance and participates in various actions that contribute

to the exacerbation of *vata*, resulting in the aggravation of said *dosha* [59]. The exacerbated *vata dosha* infiltrates the female reproductive system, giving rise to distressing symptoms and resulting in *yoni vyapat* [60].

8. Symptoms of *Yoni vyapat*

The present inquiry pertains to localised manifestations associated with the reproductive system, namely the vagina and uterus [61].

- **Toda** - Experiencing a sensation of discomfort characterised by a sharp, piercing pain in the vaginal and uterine regions.
- **Vedana** - The individual has pain in the genital system and lower abdomen, specifically referred to as "*ati vedana*" in the *Bhava Prakasha*. This pain is characterised as being more severe compared to other gynaecological illnesses [62].
- **Stambham**- The presence of rigidity or inflexibility in the vaginal and uterine regions.
- **Pipeelika sruptimiva** - Experiencing a sensation akin to the movement of ants through the affected regions of the body.
- **Karkashataam** - The presence of tactile coarseness or unevenness in the genital region.

Suptim is a condition characterised by the presence of numbness in the uterus and vagina [63].

- **Aayama** - Sensation of elongation in the vaginal and uterine regions.
- **Bhramsha** - The topic of interest is to the displacement of the vagina and uterus.
- **Yoni swana** - Auditory emissions originating from the female genitalia, often referred to as vaginal flatus.
- **Vankshana vyatha** - The sensation of discomfort or distress experienced in the region of the groyn.

9. Analytical view on symptoms of Yoni Vyapad

The symptoms associated with oestrogen deficit, such as stiffness, roughness, hyperaesthesia, and anaesthesia, as described in the *vatala yoni vyapad* by various writers, have resemblance to the symptoms often seen in cases of oestrogen deficiency [64].

❖ **Vaginal neuralgia** - The primary symptom of *vatala yoni vyapad*, as described by several writers, is experiencing pain and associated symptoms in the vagina and uterus. This symptomatology might be potentially associated with a psychiatric condition known as vaginal neuralgia [65].

❖ **Lax perineum** - The phenomenon of uterine displacement and the release of vaginal flatus are elucidated. *Vagbhata* has clinical manifestations consistent with the presence of a slack perineum, a condition often seen in individuals with oestrogen insufficiency [66].

❖ **Endometriosis** - If the phrase "Yoni" is interpreted as the uterus rather than the vagina, it is possible to draw a correlation between the "*Vatala Yoni Vyapad*" and endometriosis based on the similarity of symptoms seen in both disorders [67]. Endometriosis is characterised by the presence of endometrial deposits in the uterine ligaments, resulting in discomfort. Additionally, individuals with this condition may have heavy menstruation accompanied by painful and frothy blood. The uterus may also exhibit enlargement, with a firm or rough consistency. In certain cases, the uterus may become rigid or immobile owing to the presence of deposits on the ligaments [52].

The persistent nature of the disease may contribute to the psychological distress that later leads to the perception of anaesthesia or hyperesthesia [68]. When examining the collective descriptions of several ancient writers, it is possible to draw a parallel between *vatala yoni vyapad* and endometriosis accompanied by perineal laxity.

Noncompliance with these regimens is the primary factor contributing to a multitude of gynaecological and systemic ailments in the female population. In addition to systemic

disorders, there exists a classification of 20 gynaecological diseases known as *Yonivyapad* in classical literature. These diseases are characterised as *Yoni Roga*, which specifically affect the anatomical components of the *Artavavaha Srotas*, or the reproductive system [74]. *Srotas*, also known as bodily channels, are regarded as a significant component of the human body and play a crucial role in the transportation of *dosha*, *dhatu*, and other substances. The whole human body is regarded as *srotomaya*, meaning it is composed of *srotas* [75 - 76].

10. Role of Dosha imbalances Yoni vyapad

Pregnancy is an inherent occurrence that is universally encountered by women over their lifetime. During the gestational period, there is a disruption in the equilibrium of *Dosha*, *Dhatu*, and *Mala*, leading to the manifestation of several disorders in pregnancy. During pregnancy, there is a modified immunological state in which women are susceptible to many disorders of both metabolic and infectious origins. Vaginitis may be associated by several medical conditions, including pelvic inflammatory disorders, post-operative infections, abnormal cervical cytology, chronic cervicitis, and urinary tract infection [77]. The prevailing consensus among experts is that the majority of instances of vaginitis, around 90%, may be attributed to bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis.

According to Ayurvedic principles, it is believed that excessive consumption of *Kapha*-aggravating diet and lifestyle practises during pregnancy, along with the suppression of natural urges such as vomiting and respiration, can lead to the vitiated *Vayu* (air) carrying *Kapha dosha* (one of the three biological energies) to the genital tract [78]. This can result in the manifestation of white mucus discharge and piercing pain, which are indicative of invasive disorders caused by imbalances in *Kapha* and *Vata doshas*. The phenomenon referred to as "*Upapluta Yonivyapad*" is well recognised in academic discourse. The therapy recommended by Acharay Charak for *Upapluta Yonivyapad* involves the use of *Lodhra*, *Priyangu*, and *Madhuka* in the form of *varti*. *Upapluta Yonivyapad* is one of the twenty *Yonivyapads* that have been described by *Acharyas*. Based on the literary description, a comparison can be drawn between *Upapluta Yonivyapad* and vulvovaginitis occurring during pregnancy [79].

11. Role of Artava Vaha Srotas in Yoni vyapad

Srotas may be seen as the anatomical pathways inside the body that facilitate the transportation of essential materials for tissue development,

nourishment, and the distribution of various nutrients throughout different regions of the body [69]. It may be argued that the transportation of materials occurs through channels from the point of origin to the point of demand [70]. *Srotas* refer to the conduits via which various bodily tissues, such as *Rasa* and *Rakta*, are conveyed or through which the tissues undergo circulation. As to the analysis provided by Chakrapani, the commentator of *Charaka Samhita*, the conduits responsible for the transportation of *poshaka dhatus*, which are the components of *rasa* and other tissues that facilitate the provision of nourishment to subsequent tissues, are referred to as *Srotas*. These srotasses exhibit a high degree of complexity and variability in their structure [70].

The term "*ayanamukhani*" functions as an adjective modifying the noun "*srotamsi*." The process of *ayanamukhasravana kriya*, including the *vahana* of various *dhatu*, *upadhata*, and *mala*, consistently occurs within the *srotas*. Similar to the *sira*, *dhamani*, and *rasayani srotas*, the *avakashayukta* nature is also seen in other *srotas*. The *Shunyasthanas* of *siradhamani* and *rasayani* may be seen, however, the distance between the *srotasses* is very narrow, rendering it imperceptible.

The ancient sages of Ayurveda conducted thorough studies on the anatomical and physiological characteristics specific to women in different age groups [71 -72]. This is the underlying cause behind the reduced vulnerability of women to several illnesses. Ayurveda strongly promotes the adherence to certain regimens throughout both menstruation and post-menstrual phases [73].

Noncompliance with these regimens is the primary factor contributing to a multitude of gynaecological and systemic ailments in the female population. In addition to systemic disorders, there exists a classification of 20 gynaecological diseases known as *Yonivyapad* in classical literature. These diseases are characterised as *Yoni Roga*, which specifically affect the anatomical components of the *Artavavaha Srotas*, or the reproductive system [74]. *Srotas*, also known as bodily channels, are regarded as a significant component of the human body and play a crucial role in the transportation of *dosha*, *dhatu*, and other substances. The whole human body is regarded as *srotomaya*, meaning it is composed of *srotas* [75 - 76].

12. *Yonivyapad* associate with endometriosis

Endometriosis is a prevalent benign gynaecological condition that is distinguished by the presence and proliferation of viable

endometrial tissue beyond the confines of the uterine cavity. The symptoms associated with endometriosis exhibit similarities to certain *Yonivyapads* mentioned in classical texts [85].

Achuthan et al. (2022) described a case involving a 37-year-old female of Swedish nationality. The patient approached with primary symptoms of intense lower abdomen and pelvic discomfort, as well as excessive menstrual bleeding, which had persisted for a duration of 7 years. Notably, the pain was particularly acute one day previous to the beginning of menstruation and subsided within 1-2 days following the commencement of bleeding. The patient received a recommendation for a USG scan, which revealed the presence of endometriosis and a cyst located in the left ovary. The practise of *Sodhana chikitsa* was implemented, with the whole duration of the therapy spanning a total of 42 days. The patient was recommended to schedule a follow-up appointment in six months. Following the administration of the medication, a notable amelioration in the patient's condition was seen, which subsequently elicited a heightened level of pleasure from the patient over the outcome [85].

Endometriosis manifests in three distinct entities, namely peritoneal lesions, deep endometriosis, and ovarian endometriotic cysts, also referred to as endometriomas. These entities often coexist among affected individuals [86]. Endometriosis may be characterised as a condition complex known as *Udavartini Yonivyapad* in Ayurveda (Fig 2) [87]. The present inquiry pertains to the surgical chronicles surrounding the laparoscopic cystectomy procedure performed on the right side endometrioma, often referred to as a "chocolate cyst," throughout the year 2017. The laboratory tests yielded no significant findings, except for the Tumour marker, namely the CA-125 result of 41.1U/ML.

The ultrasound examination indicated the presence of a large uterus with adenomyosis. The ultrasound examination revealed the presence of endometriomas in both ovaries. These endometriomas exhibited thin walls and contained contents with diffuse homogeneous ground-glass echoes. The dimensions of the endometriomas were approximately 3.72cm x 1.84cm in the right ovary and 3.09cm x 2.22cm in the left ovary. Furthermore, the examination also detected highly echogenic peritoneal fluid in the cul-de-sac and a pre-ovulatory follicle in the left ovary [88].

Following a 10-week therapy regimen, the patient had total recovery from lower abdominal discomfort. Additionally, the patient experienced regular menstrual cycles occurring at typical intervals, devoid of any associated difficulties. Following the completion of therapy, the CA-125

tumour marker value was seen to be 16 U/ML [82]. Additionally, an ultrasonography (USG) examination indicated normal results for both the right and left ovaries, with a reduction in cyst size to 1.45cm x 1.68cm. Therefore, it can be inferred

that the treatment regimen demonstrates efficacy in the management of *Udavartini Yoni Vyapad* with *Kaphajagranthi*, specifically in cases of Endometriosis with Ovarian Endometrioma [87].

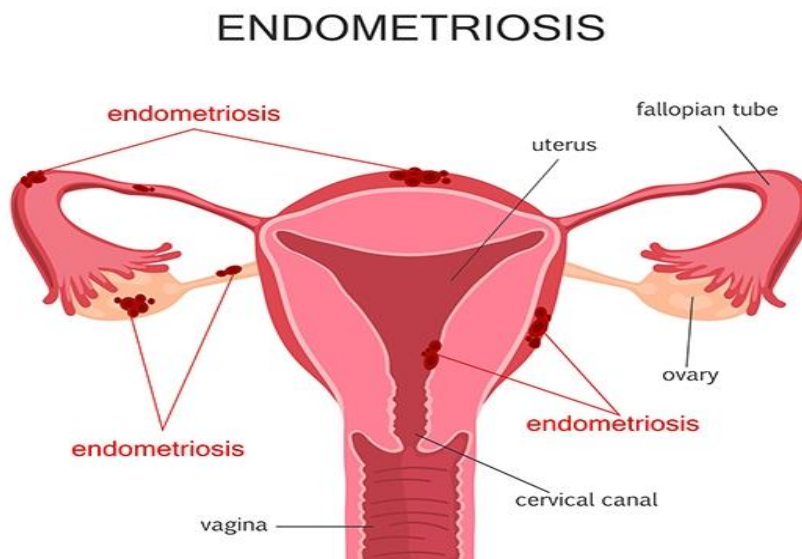


Fig 2. Endometriosis [89]

Chronic pelvic pain is a prevalent symptom seen in a significant proportion of instances, ranging from 71% to 87%, among individuals diagnosed with endometriosis. This condition involves the abnormal growth of endometrial glands and stroma beyond the confines of the uterine canal. The current treatment strategies for addressing chronic pelvic pain, which has been a persistent and distressing condition, remain uncertain and lack sufficient evidence to inspire confidence [77]. Ayurveda has the potential to provide an efficacious pain treatment strategy, however it is important to note that establishing a direct link between endometriosis and the classical basis of Ayurveda is not feasible [77].

13. Treatment of Endometriosis and Yonivyapad

Endometriosis is a distressing disorder that affects the life of a woman, a proper and effective treatment approach is needed. Ayurveda may offer a non-invasive yet effective treatment and management approach, which includes the following- The primary treatment approach for *Vatala Yonivyapad* is the application of oleation, sudation, vasti (medicated decoction and oil enemas), *uttara vasti* (enemas administered via the vaginal or urethral channel), and *parisheka* (the pouring of medicinal liquids over the affected regions) [80]. The administration of therapies, diets, and activities that provide relief for *vata*

should be considered in the management of *vatala* gynaecological disorders [81].

The treatment concepts for gynaecological problems resulting from *vata* imbalance include managing *vata* by the administration of therapies and interventions aimed at easing *vata*, such as oleation, sudation, and medicated enemas [87]. It is essential to adhere to a comprehensive regimen including various strategies, therapeutic interventions, physical exercises, pharmacological interventions, and dietary choices aimed at mitigating the effects of *vata dosha*.

- For the aim of local irrigation, massage, and *Pichu* (tampons), it is recommended to use oils or lubricating fats that have been produced and processed with heated and unctuous herbs [83].
- The process of oleation, specifically using *Traivrata Sneha*, which is a mixture of ghee, oil, and muscle fat.
- The use of meat-based broth derived from wildlife, aquatic organisms, especially creatures inhabiting wetland environments [84].
- The administration of an enema using milk infused with *dashamula* herbal formulation.
- The ingestion of milk made with *dashamula* by oral administration.
- Herbs and Formulations: Ayurveda herbs and formulations help in synergistic hormone balance, ovulation problems, premature ovarian failure, and adhesions prevent recurrent miscarriage, and regulate cervical mucosa [81]. Some herbs that

have been traditionally used in Ayurveda with their positive effects on the various symptoms of Endometriosis or *Yonivyapad* are explained below-

- *Nirgundi* may help boost fertility regulate the menstrual cycle and helps in heavy bleeding.
- *Lavang* is a blood purifier and fertility booster.
- *Shilajit* helps to purify the reproductive system.
- *Handra* and *Manjishta* exhibit supportive action on the uterus.
- *Brahmi* helps to calm the mind.
- *Shatavari* is a nourishing tonic for the uterus.
- *Punarnava* and *Guggulu* help to remove any obstruction in the passages.

- The *doshas* are lame and do not get vitiated without the basic involvement of *vata dosha*. So, the treatment should be directed to pacify the vitiated *vata* & eradication of the cause. This is the main principle of treatment of *yonivyapads*. 1st should normalise the *vata* & then treatment for other *doshas* should be done. In all *yonivyapads*, after proper *snehana* & *svedana vamanadi panchakarma* procedures should be used, followed by *uttara basti* [87].

14. Discussion

Ayurveda describes *Artavavaha Srotas'* *Moolsthana*, Pathophysiology, Clinical situations, and Treatment. The female reproductive system in *Artavavaha Srotas* resembles contemporary medicine. Ayurveda described components of the *Artavavaha Srotas* that resemble the female reproductive system. As to *Acharya Sushruta*, *Artavavaha Srotas* injuries cause *Bandhytwa* (infertility), *Maithuna Asahishunta* (dysperunia), and *Artava Naasha. Dosha, Dhatu, and Mala* imbalances during pregnancy induce endometriosis. A 23-year-old unmarried woman with a right side endometrioma measuring 6.9×5 cm and occasional stomach discomfort was diagnosed with *udavarta yonivyapada*. Primary therapies were *yoga basti* (eight medicated enemas) and *Kuberaksha vati*. *Yoga basti* is recommended for discomfort, inflammation, and other *vata*-associated pelvic disorders connected to fertility. Surgery was avoided by pain relief. Discontinuing medications led to an increase in endometrioma size to 10.3×5.5 cm. The second *Yoga basti* preceded the wedding. As a seasonal regimen, *yoga basti* can also help fertile women with primary and secondary dysmenorrhea enhance the quality of life [89].

Achuthan et al., 2020 studied that a 37-year-old female of Swedish nationality presented with primary symptoms of intense lower abdomen and pelvic discomfort, as well as excessive bleeding

during menstruation, persisting for a duration of 7 years. This pain and bleeding were most prominent one day previous to the beginning of menstruation and subsided within 1-2 days following the commencement of bleeding. The patient received a recommendation for a USG scan, which revealed the presence of endometriosis and a cyst in the left ovary. The practise of *Sodhana chikitsa* was implemented, with the whole duration of the therapy spanning a total of 42 days. The patient was recommended to schedule a follow-up appointment after a period of 6 months. Following the administration of the medication, a notable improvement in the patient's overall condition was seen. Consequently, the patient also conveyed a heightened level of contentment with the outcome [90].

Yonivyapad accounts for 70% of gynaecological issues, according to Choudhary et al., 2023. *Paripluta*, for example, causes painful coitus, dysmenorrhoea, etc. Delaying treatment may increase miscarriage, persistent pelvic discomfort, STDs, organ damage, and long-term reproductive impairment upon recurrence. According to this study, *Yonivyapad* is treated with oleation, sudation, *vasti* (medicated decoction and oil enemas), *uttara vasti* (vaginal or urethral enemas), and *parisheka* (pouring medicinal liquids over the affected regions). *Vatala* gynaecological disease should be treated using *vata*-relieving foods, therapies, and activities [91].

Conclusion

The maintenance of dosha equilibrium is crucial for optimal health in Ayurveda since any disruption in this balance may result in the manifestation of illness. The connection between *doshas* and *lakshanas* is enduring and intricately linked to symptomatic manifestations. *Yoni vyapad*, a condition affecting women, is said to be caused by an excessive *vata dosha*, as well as factors such as physical activity like walking, sexual activity, masturbation, and the presence of a prolapsed uterus. There are many primary factors contributing to the occurrence of *Yoni vyapad*. Women with a predominance of the *Vata dosha* who engage in dietary and lifestyle practises that exacerbate *Vata* tendencies may experience an aggravation of their *Vata dosha*. Dietary and Lifestyle Recommendations for Individuals with *Vata Dosha*. If the location of *Yoni* is uterine rather than vaginal, the term "*vatala yoni vyapad*" might potentially be associated with endometriosis due to the presence of similar symptoms. The study's findings indicate a potential link between *Yonivyapad* and the development of endometriosis. Treatment options for this condition include

oleation, sudation, *vasti* (administration of medicinal decoctions and oil enemas), *uttara vasti* (administration of vaginal or urethral enemas), and *parisheka* (application of herbal solutions to the afflicted regions). The treatment of *Vatala* gynaecological illness should include the incorporation of *vata*-relieving foods, treatments, and activities.

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