

# Pedagogical Review on Ayurveda Concept of Uterine Fibroids

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## Abstract

Uterine fibroids are common reproductive tract tumors of women and they are managed by the Ayurveda system of medicine. Reference on this condition is limited in Ayurveda texts. This study was aimed at collecting research and concept evidence to justify uterine fibroids, with the most similar diseases described in Ayurveda. A review of selected Ayurveda text books and a computer search of databases were carried out to collect data. Search data were interpreted in a meaningful manner with the help of Ayurveda basic concepts. Recent researchers correlate uterine fibroids with *Arbuda*, or *Granthi*. Pathogenesis, signs, and symptoms of uterine fibroids could closely correlate with the description given in *Susrutha samhita* on *Arbuda* than *Granthi*. Suppuration, presence of capsules, considered as smaller to *Arbuda* and the treatment strategy are the dissimilarities of this condition with *Granthi*. Uterine fibroids could be placed as *Tridosha*, *Mansaja*, and *Yapya* disease according to various classifications of *Arbuda*. Various clinical presentations of individuals with this condition can be explained with the help of *Tridosha* involvement. Disease pathogenesis could be described based on *Shadkriyakala* by following the *Samprapthi* of *Arbuda*. Further treatment approaches of uterine fibroids show a close relationship with *Arbuda Chikitsa*. They can be treated with *Shodhana*, *Shaman*, and *Shalyaja* treatments, as mentioned in *Arbuda Chikitsa*. In conclusion, the condition of uterine fibroids is closely related with *Arbuda* than *Granthi*. Uterine fibroids can be considered as a *Mansaja* type of *Yapya Garbhash Gatha Arbuda* due to vitiation of *Tridosha*. The line of treatment for this condition could be described by *Arbuda Chikitsa*.

**Keywords:** *Arbuda*, Ayurveda, *Granthi*, uterine fibroids

**Key Summary:** In this study, a pedagogical review on the Ayurveda concept of uterine fibroids aimed at collecting evidence to correlate uterine fibroids with the most suitable disease mentioned in Ayurveda and at developing its Ayurveda concept. When analyzing the review of Ayurveda Acharyas on *Arbuda*, it was identified that uterine fibroids were the *Mansaja* type of *Yapya Garbhash Gatha Arbuda* due to the vitiation of *Tridosha*. Further treatment of uterine fibroids can follow the *Arbuda chikitsa*.

## INTRODUCTION

Uterine fibroids are considered the most common reproductive tract tumors of reproductive-aged woman. Prevalence of this disease ranges from 20% to 40% of this age group.<sup>[1]</sup> This disease has a long history; it is known to be first described in 1793 by Matthew Baillie of St George's Hospital, London.<sup>[2]</sup> Treatments for fibroids are mainly based on surgical procedures, either myomectomy or hysterectomy. However, many women are searching for alternative systems of medicine due to a treatment lag in conventional medicine.

Among other alternative therapies, herbal treatments for fibroids are used in several medical traditions and countries.<sup>[3]</sup> Ayurveda is science or a time-tested traditional system of medicine that originated in India around 6000 years ago. Herbal treatment methods in the Ayurveda system of medicine are practiced mostly throughout India, Nepal, and Sri Lanka.<sup>[4]</sup> This system has been practiced for many centuries in the island nation. Considerable numbers of uterine fibroid cases are also getting treated by the Sri Lankan Ayurveda system.<sup>[5]</sup> Hence, it is important to develop a strong Ayurveda

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concept on this disease condition, which has shown encouraging results during the clinical setup. When we go through Ayurveda literature, there are no direct references that can be found on uterine fibroids. However, sufficient evidence is available to prove that this condition has been identified by Ayurveda pioneers. A considerable number of studies carried out by recent researchers discussed this condition with several views. This study was aimed at collecting research and concept evidence to justify uterine fibroids, with most similar diseases described in Ayurveda.

A study on the pedagogical review on the Ayurveda concept of uterine fibroids is a part of a main research titled “Randomized, single blind, clinical trial to compare the efficacy of selected two Ayurveda drug regimens on the treatment of uterine fibroids,” which investigators are currently working on. This study is registered in the WHO International clinical trial registry (ISRCTN16108738) and funded by UGC, Sri Lanka. This pedagogical review enhances the understanding of clinical findings toward the Ayurveda concept related to uterine fibroids.

## MATERIALS AND METHODS

A comprehensive review was conducted based on Google scholar up to September 2019 for articles in English, Sanskriti, and Sinhalese. The search keywords were uterine fibroids and Ayurveda, leomyoma and Ayurveda. The currently available published research works were thoroughly analyzed. To obtain authentic data about *Arbuda*, we searched literature in *Brihatraya* and *Laghutraya*. *Brihatraya* and *Laghutraya* were identified as major authentic texts of Ayurveda medicine.<sup>[6]</sup> Their findings were discussed in a systematic manner to justify uterine fibroids correlated with *Arbuda*.

## RESULTS AND DISCUSSION

Among several disease conditions, the most obvious terms used in the recent studies that correlate with uterine fibroids are *Arbuda* and *Granthi* [Table 1]. Even though Ayurveda literature claims a close relationship between these two diseases, text book references were collected on both conditions [Table 2].

**Table 1: No. of recent researches that considered uterine fibroids as Arbudha or Granthi**

Disease related	No. of studies	Reference studies
<i>Granthi</i>	06	Dhiman (2014), <sup>[7]</sup> Murthy et al. (2015), <sup>[8]</sup> Singh (2017), <sup>[9]</sup> Perera and Dei (2018), <sup>[10]</sup> Shubhashree et al. (2019), <sup>[11]</sup> Rawat et al. (2019) <sup>[12]</sup>
<i>Arbuda</i>	07	Bharathi and Jain (2014), <sup>[13]</sup> Yogesh et al. (2015), <sup>[14]</sup> Kowsalya et al. (2017), <sup>[15]</sup> Yogesh et al. (2017), <sup>[16]</sup> Kaul et al. (2017), <sup>[17]</sup> Archana et al. (2018), <sup>[18]</sup> Koul (2019) <sup>[19]</sup>

It has been revealed that all the six texts related to *Brihatraya* and *Laghutraya* contain references on both the conditions either in one single chapter or in several places [Table 2]. With those references, in-depth arguments were created to determine the most suitable condition for uterine fibroids.

## SIMILARITIES BETWEEN ARBUDA AND UTERINE FIBROIDS

The pathogenesis, signs, and symptoms of *Arbuda* can be closely correlated with uterine fibroids in the following way. The most elaborate description on *Arbuda* is given in *Susruta Samhita*.<sup>[22]</sup> Acharya *Susruta* has mentioned the pathogenesis of *Arbuda* as being common to any type of tumor arising in the body. With the help of that reference, similarities between *Arbuda* and uterine fibroids can be demonstrated.

### Clinical Features

Clinical features of fibroids show a close relationship with the clinical presentation of *Arbuda*, with the description given in *Susrutha Samhita*. It is said that *Arbuda* can occur anywhere in the body or any tissue of the whole body may be damaged (“*Gatra Pradeshe*”). Considering the whole body, *Susrutha* has given a broader area as a location and it gives the idea that localized tumors can be raised in any part of the body. Fibroids develop as a localized myometrium tumor in the uterus and they can also be considered under *Arbuda* with this concept. According to *Susrutha*, *Arbuda* occurs by aggregation of *Dosha* (*Eva Dosha*). This is the initial step of disease pathogenesis in Ayurveda, as tumor genesis is initiated by changing internal factors. Predominantly *Arbuda* is a disease caused by vitiation of the *Mamsa Dhatu* (muscle tissue) (*Mamsamabhi Pradushyam*). According to the concepts in *Arbuda* condition, there will be a damage of the muscular connective and epithelial tissues. Stewart described a histological pattern of uterine fibroids as benign monoclonal tumors arising from the smooth muscle cells of the myometrium.<sup>[30]</sup> According to *Susrutha Samhitha*, the features of *Arbudha* can be correlated with uterine fibroids as follows. *Vruttam*; fibroid growth is characterized by hard, round, and whorled tumours.<sup>[31]</sup> *Sthiram*; means stony hard and stiff. *Tinelli et al.*<sup>[32]</sup> said that the leiomyomas are rigid masses, formed due to

**Table 2: References available at text books on Arbuda and Granthi**

Book	Classification	Relevant chapter
Charaka samhita	<i>Brihatraya</i>	Ch./chi./12, <sup>[20]</sup> Ch./su./10 <sup>[21]</sup>
Susrutha samhita		Su./ni /11 <sup>[22]</sup> , Su./chi./18 <sup>[23]</sup> , Su./utt./22 <sup>[24]</sup>
Ashtanga samgraha		A.S./utt./12, <sup>[25]</sup> A.S./utt/ 35 <sup>[26]</sup>
Sharangdhara samhita	<i>Laghutraya</i>	S.S./ 7 <sup>[27]</sup>
Madava nidana		M.N./38 <sup>[28]</sup>
Bhava prakasha		B.P./m.k.III/44 <sup>[29]</sup>

the composition of large amounts of components of extracellular matrix (ECM), in particular: fibronectin, proteoglycans, and collagen I, III, and IV. *Mandarujam*: Pain is very mild or not a significant feature of *Arbuda*. Studies show that 50% of fibroid cases are asymptomatic, hence they do not complain of pain.<sup>[33]</sup> Again, variable degrees of dysmenorrhoea, dyspareunia, and non-cyclic pelvic pain can be seen only in some cases of symptomatic fibroids.<sup>[34]</sup> *Mahantam*: Can grow till a large size. Even recent researchers reported large uterine fibroids of 20–23 cm.<sup>[35]</sup> *Analpamulam*: Ayurveda says that *Arbuda* develops with a deep route or growth and it spreads locally deep into the tissue. Recurrences occur at the same site after myomectomy, and these could be due to this deep-seated route. Studies show that fibroid recurrences are common and around 25% of women get fibroids after myomectomy.<sup>[36]</sup> *Chira Vrudhi*: It is chronic in nature and gradual in progress. Growth of the uterine fibroid tumors is characterized as slow proliferation with concurrent deposition of abundant extracellular matrix, usually in a steroid–hormone dependent manner.<sup>[37]</sup> *Apakam*: It is non-suppurated. Acharya Sushruta states that *Arbuda* is mainly due to the vitiation of the *Tridosha*, where *Kapha* and *Meda* (fatty tissue) have been considered in a predominant state, due to which *Arbuda* does not get suppurated.<sup>[22]</sup> Suppuration is not a feature of uterine fibroid pathogenesis.<sup>[38]</sup> *Mamshochhayam*: Fibroids are monoclonal tumors of the uterine smooth muscle cells, and they are formed by unnecessary and uncontrolled abnormal proliferation of tissue.<sup>[39]</sup> In the same way, *Arbuda* develops by unhealthy growth of *Mansa Dhatu* (muscle tissue).

### How *Arbuda Samprapthi* Is Related to Pathogenesis of Uterine Fibroids

*Samprapthi* or pathogenesis of *Arbuda* is described in Susruta Samhita as aggravated *Dosas*, *Mamsa*, getting localized in any body part, producing a local swelling of accumulated *Mamsa*, and especially deeper muscles are involved.<sup>[22]</sup> The book *Madava Nidana* referred to the same *Samprapthi* of *Arbuda*.<sup>[28]</sup> Ashtanga Sangraha states that *Medas* and *Kapha* are more prominent in the pathogenesis.<sup>[26]</sup> *Arbuda Samprapthi* is similar to *Granthi*

*Samprapthi* as per the Charaka Samhita.<sup>[20]</sup> From the point of view of uterine fibroids, this *Samprapthi* occurs related to *Garbhashaya* (uterus). With all these views in mind, the pathogenesis of uterine fibroids can be developed in the following way. Due to etiological factors, including excessive consumption of meat by women who already have *Mansa Dushya* (*Nidana* of *Mansaja Arbuda*), *Dosha* gets aggravated. Here, *Kapha* and *Vata Dosha* (as it is a disease of *Pakvashaya*) are more prominent.<sup>[26]</sup> By this, the specific *Mansa Dhatu* of *Garbhashaya* (myometrium) is vitiated. This process of pathogenesis is localized in *Garbhashaya* and it produces a local swelling of accumulated *Mansa* at the myometrium [Figure 1].

### Etiological Factors

Ayurveda explored etiological factors for the uterine fibroids related to the vitiation of *Vata*, *Kapha*, and *Mamsa*. *Vata* aggravating factors are excessive intake of bitter, pungent, astringent, dry foods and stressful conditions. *Kapha* aggravating factors are excessive intake of sweet, oily food and those of a sedentary nature. *Mamsa* aggravating factors are excessive use of exudative foods such as meat, fish, yoghurt, milk, and cream. Behaviors leading to exudation such as sleeping during the day and overeating are some of the causes for pathogens invading the fatty tissues.<sup>[22]</sup> *Medo* aggravating factors are excessive intake of oily foods, sweets, alcohol, and a lazy attitude. Studies have proven that there is an association between specific dietary consumption and uterine fibroids.<sup>[40,41]</sup>

### WHY UTERINE FIBROIDS CANNOT BE CONSIDERED AS *GRANTHI*?

*Granthi* is a condition that shows similar features of *Arbuda* based on pathogenesis, clinical features, and treatments.<sup>[20]</sup> Some Ayurveda authors and researchers correlate uterine fibroids with *Granthi*. A few important facts could be taken forward to discuss why uterine fibroids cannot be considered as *Granthi*. Acharya Charaka said that *Granthi* should be suppurating, but uterine fibroids are solid growths and not suppurating tumors.<sup>[20]</sup>

During the development process of uterine fibroids, a pseudo capsule is formed by the compression of normal

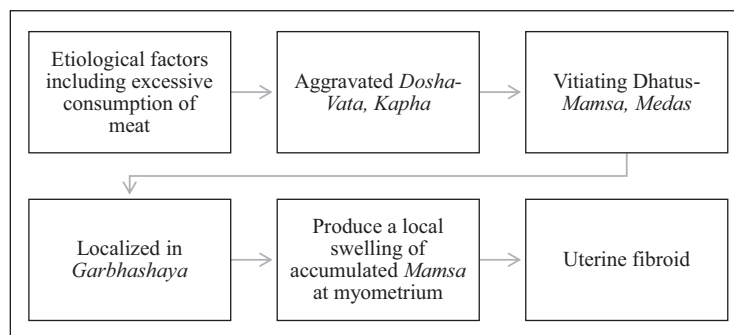


Figure 1: Ayurveda pathogenesis of uterine fibroids



uterine tissue by the fibroid tissue. However, fibroids are non-capsulated tumors as they do not get structurally formed into a true capsule.<sup>[42]</sup> Ayurveda literature says that *Granthi* is capsulated. When a *Granthi* is surgically removed, *Acharya* Charaka emphasizes<sup>[20]</sup> that it should be removed along with the capsule to prevent recurrence.

The argument of *Purvarupa* of *Arbuda* is considered, as *Granthi* should also be taken into account in this discussion. In a recent study, emphasis on *Granthi* can be taken as an immediate precursor stage of *Arbuda*.<sup>[43]</sup> They have referred to the concept mentioned by *Acharya* Vagbhatta that the swelling of *Granthi*, which is smaller in comparison to that of *Arbuda*, should be considered as *Purvarupa* of *Arbuda*.

The treatment of *Granthi* mentioned by *Susrutha* Samhitha shows dissimilarities between *Granthi* and fibroids. The treatment approaches on *Ama* (unripe stage) or *Pakva* (suppurate) stages would not provide any similarity with fibroid treatments.<sup>[23]</sup>

### UTERINE FIBROIDS RELATED TO ARBUDA CLASSIFICATIONS

Ayurveda texts were given classifications for *Arbuda* based on several factors, such as the main vitiated *Dosha*, the involvement of *Dhatu*, or according to patterns of pathogenesis. These classifications have multiple benefits, such as understanding clinical presentations, deciding the management, and recognizing different outcomes and complications. Similarly, modern medicine also discussed several classifications on uterine fibroids based on site, number, size etc.<sup>[44]</sup> The differences of uterine fibroids in each individual could be understood clearly.

**Classification based on *Dosha*:** Uterine fibroids can be classified under three main *Dosha* of Ayurveda, namely *Vata*, *Pitta*, and *Kapha* [Table 3]. The growth rate of multiple uterine fibroids in a uterus is not associated with their location or size and concurrent progression and regression of different fibroids may occur under the same hormonal conditions.<sup>[45]</sup> These findings could aid in understanding the *Dosha* involvement and the classification based on the earlier findings.

**Table 3: Different clinical presentations of uterine fibroids according to *Dosha* involvement**

Dosha	Features of tumor	Dominant clinical features
<i>Vataja Garbhashagata Arbuda</i>	Hard, Multiple,	Dysmenorrhea, dyspareunia, pelvic pain
<i>Pittaja Garbhashagata Arbuda</i>	grow fast	Menorrhagia, irregular menstruation
<i>Kaphaja Garbhashagata Arbuda</i>	Large in size, slow growth	Heaviness of the abdomen, pressure symptoms

Out of seven *Dhatu*, *Meda*, *Rakta*, and *Mansa* mainly contributed to the pathogenesis of *Arbuda*. As these categories are related to the type of tissue in the body, consideration should be given to the category that uterine fibroids could be placed into. *Medaja Arbuda* appears in fatty tissue of the body, and tumors arise in blood and are named as *Raktarbuda*. Uterine fibroids or leiomyomas are tumors occurring in smooth muscle cells of the myometrium; they can correctly be considered as *Mamsaja Arbuda* (tumors occurring in muscular tissue).

*Avedana*, *Snigdha*, *Ananyavarna*, *Apakam*, *Ashmopamam*, and *Aprachalyam* are the clinical features given in *Susrutha* Samhitha about *Mamsaja Arbuda*.<sup>[22]</sup> These features are identical with the uterine fibroids in the following manner. *Avedana* (painless)—uterine leiomyoma is a painless tumor unless it causes pain due to the irritation caused by neighboring nerves or as a pressure symptom. *Snigdha*—the tumor is glossy in its outer appearance. *Ananyavarna*—the tumor is the same color of the tissue that it grows. *Apakam*—non-suppurating. *Ashmopamam*—stony-like consistency or hard tumor. *Aprachalyam*—immovable.

Under the etiological factors of *Mamsaja Arbuda*, excessive consumption of meat was included (*Pradushta mansasya narasya bad metad bhaven mansa paraya nasya*).<sup>[22]</sup> Some of the recent studies also claimed that high intake of meat and fats are associated with a higher prevalence of uterine fibroids.<sup>[41]</sup>

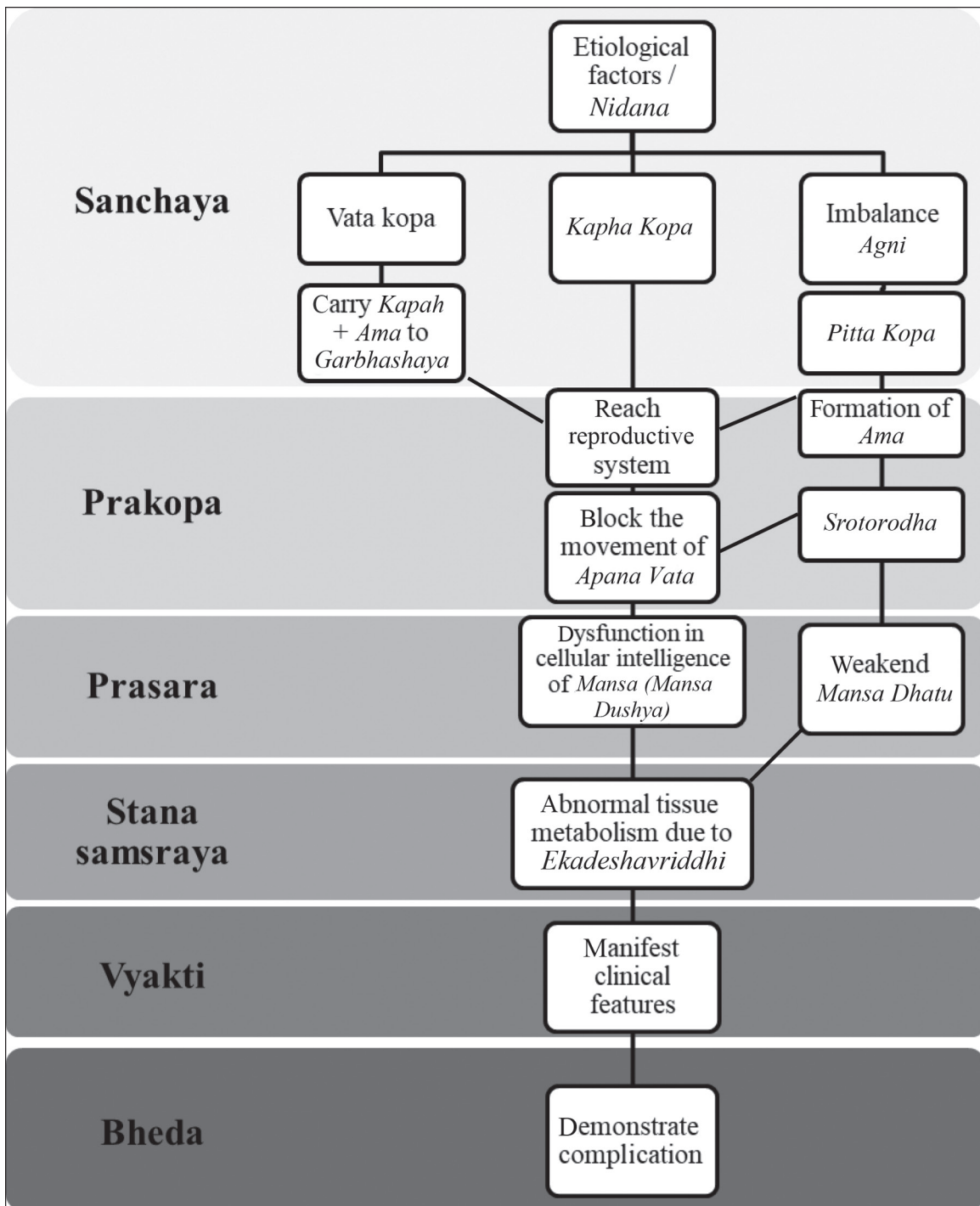
**Basis on prognosis (*Sadyasadyata*):** Prognosis is different based on the type of *Arbudha*. *Mamsaja Arbuda* is said to be *Asadya* (incurable). Hence, uterine fibroids also become *Asadya*. In the chapter, disease prognosis in *Charaka* Samhitha is described; two types of *Asadya* diseases, namely *Yapya* or maintainable disease and *Anupapakrama* or diseases that are impossible to treat, are mentioned.<sup>[21]</sup> As uterine fibroids are shown to be recurrent, they cannot be cured totally by surgery or by medicines. Thus, uterine fibroids can be considered under *Yapya* disease under the *Asadya* category due to the factors just cited; they also occur in a deep-seated organ (uterus). *Charaka* says that *Yapya* diseases afflict deep-seated body tissue (*Gambheera*).<sup>[21]</sup> Therefore, it is more logical to consider uterine fibroids as *Yapya* disease.

***Adhyarbuda* and *Dwirarbuda***<sup>[21]</sup>: Another tumor grows over the pre-existing one and this is known as *Adhyaarbuda*. *Dvirarbuda* tumors grow simultaneously or one after the other. Therefore, uterine fibroids can be placed under both the categories as they recur and are sometimes multiple.

### PATHOGENESIS OF UTERINE FIBROIDS ON SHADKRIYAKALA (SIX STAGES IN PATHOGENESIS)

*Acharya* *Susrutha* has explained six stages in the pathogenesis of all diseases (*Shadkriyakala*) or they can be cognized as six stages of disease progression [Figure 2].<sup>[46]</sup>

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**Figure 2:** Pathogenesis of uterine fibroids based on *Shadkriyakala*

According to Ayurveda, the development of any disease condition can be described with the help of *Shadkriyakala* from the initial step. Sastry (2001) says that the concept of *Shadkriyakala* described by Susruta suits the pathology of the *Arbuda* more than the pathogenesis itself.<sup>[47]</sup>

**Sanchaya:** In this stage, the vitiated *Kapha* due to the consumption of etiological factors is taken to the reproductive system by *Vata Dosha*. At the same time,

those etiological factors cause an *Agni* imbalance, make *Pitta* vitiation, and produce *Ama*. This *Ama* accelerates the *Kapha* vitiation and is transferred to *Garbhashaya* by *Vata Dosha* along with the *Kapha*. The initial step of pathogenesis can be considered during the stage of *Sanchaya*. The association of risk factors and the influence of reproductive hormones can be considered during this stage. *Sanchaya* is the early stage of localized neoplastic changes.

**Prakopa:** Due to the accumulation of vitiated *Kapha*, *Ama* blocks the movements of *Apana Vata*. Due to this, *Apana Vata* function in reproductive organs gets vitiated. The transformation of myometrium stem cells into fibroid progenitor cells is initiated under the influence of reproductive hormones and other factors; the initial step of the pathogenesis can be considered in the stage pertaining to *Prakopa*.

**Prasara:** Vitiated *Kapha* is pushed into myometrial tissue by the abnormal functions of *Apana Vata* and this causes dysfunction in the cellular intelligence of memorial tissue. *Prasara* comes to mean metastasis. During this stage of differentiation wherein fibroid cells are changed from progenitor cells by transforming normal stem cells, *Prasara* occurs.

**Sthana Samsraya:** This leads to abnormal tissue metabolism at *Mansa Dhatu* (myometrial tissue) and produces fibroids

as *Ekadeshavridhi*. Complete metastasis and secondary growth occur in this stage. Hence, this level can be correlated with the development of fibroids by collecting fibroid cells in the uterine myometrium.

In the stage of *Vyakti*, specific features of dominating *Dosha* of an individual are demonstrated as clinical features. The clinical signs and symptoms can be observed.

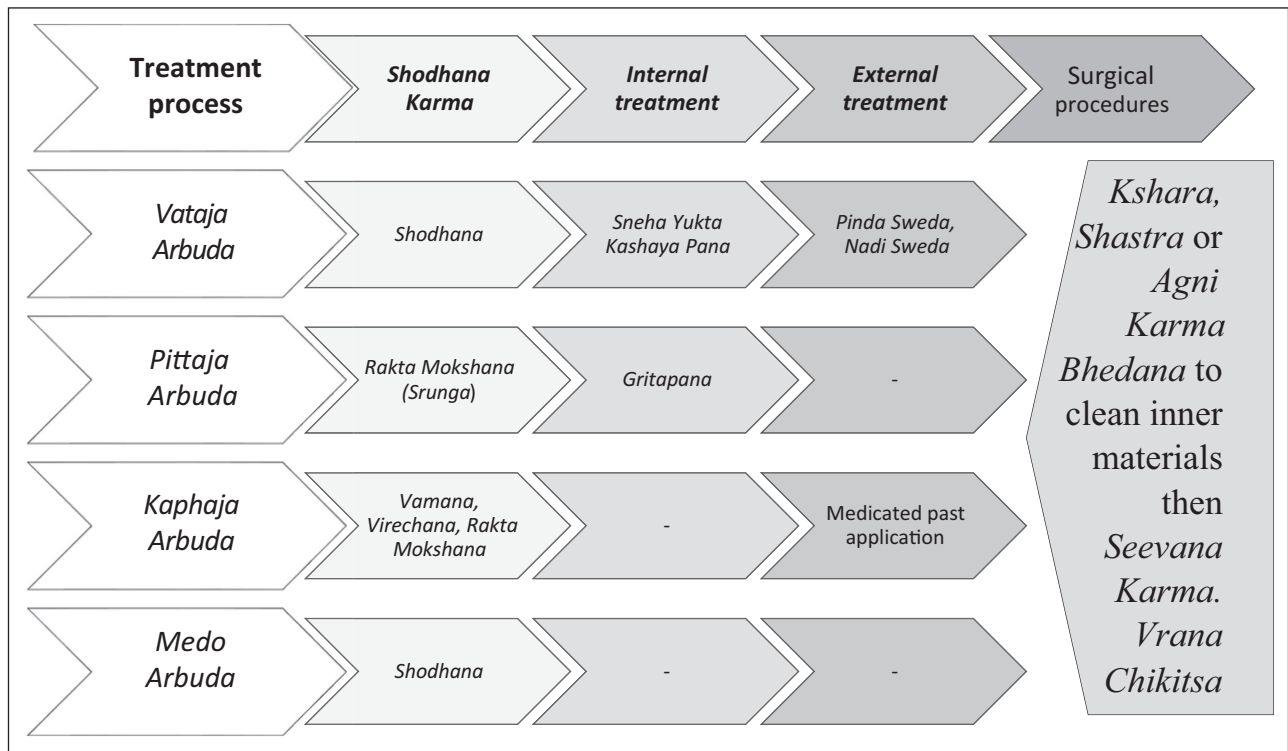
*Bheda* is the stage wherein the differentiation of growth is understood on the basis of histopathology. Further, the manifestation of complications due to growth can also be seen.

**Samprapti Ghataka**

Components of manifestation of disease are named as *Samprapti Ghataka*.<sup>[21]</sup> The main *Samprapti Ghataka* involving *Garbhashagata Arbuda* is mentioned in Table 4.

**Table 4: Sampraptighataka of Garbhashagata Arbuda**

Category	Samprapti Ghataka
1. <i>Dosha</i>	<i>Vata Kapha</i> predominant <i>Tridoshika Vyadhi</i>
2. <i>Dushya</i>	<i>Mamsa</i> is the principle <i>Dushya</i> .
3. <i>Agni</i>	<i>Dhatvagni Mandata</i> specially <i>Mansa Dhatuvagni</i>
4. <i>Srotasa</i>	<i>Rasavaha, Raktavaha, Mansavaha, Medovaha Srotasa</i> and <i>Artavavaha</i> along with the involvement of other <i>Srotasa</i>
5. <i>Sroto Dushti</i>	<i>Sroto Sanga</i> is initial defect in <i>Srotasa</i> followed by <i>Atipravriti</i>
6. <i>Udbhavasthana</i>	<i>Garbhashaya, Pakvashayottha Vyadhi</i>
7. <i>Roga Marga</i>	<i>Abhyantara Roga Marga</i>
8. <i>Svabhava</i>	<i>Chirikari</i>
9. <i>Sadhyasadata</i>	<i>Asadhya (Yapya) Vyadhi</i>



**Figure 3: Summary of the Arbuda treatment**<sup>[23,26]</sup>

## UTERINE FIBROID TREATMENT APPROACH BASED ON ARBUDA CHIKITSA

Susruta and Vagbhata have considered specific treatment lines for each type of *Arbuda*.<sup>[23,26]</sup> *Vataja Arbuda* treatment involves *Sneha Yukta Kashaya Pana* (decoctions incorporated with oily substances), *Pinda Sweda*, *Nadi Sweda* (sudation methods), and *Rakta Mokshana* by *Srunga* (bloodletting procedure). *Grita Pana* (ghee preparations) is indicated for *Pittaja Arbudha* along with *Mrudu Upanaha Sweda* (sudation method), *Virechana* (purgation), and application of a medicated paste over the tumor. *Kaphaja Arbudha* is treated first by *Vamana* (Vomiting) *Virechana*, *Rakta Mokshana* and then medicated paste is applied over the tumor. *Medo Arbuda* is indicated for treatment mainly with surgical procedures; *Swedana*, *Bhedana* (incision) to clean inner materials; and finally, *Seevana Karma* (Sutured). After bleeding stops, medicated paste and oil are applied over the wound. The book *Ashtanga Sangraha* says that *Arbuda* should be removed without leaving any remnant by the use of *Kshara*, *Shastra*, or *Agni karma* (cauterization method) to prevent reappearance. When considering the treatment just cited, it is clear that the line of treatment was developed on the basis of *Shodhana* (purification) and *Shaman Chikitsa* (palliative treatment). When one's disease cannot be controlled by these measures, surgical procedures are introduced.

A line of Ayurveda treatment on uterine fibroids has been developed based on the treatment plan just mentioned [Figure 3]. The treatment of fibroids starts with *Shodhana Chikitsa*. *Vata*, *Kapha* dominating *Tridoshas* are involved in the pathogenesis of the *Arbuda*. Hence, *Vata Kaphahara* medications are required to overcome disease evacuation. *Dushya* are *Mansa* and *Meda*; hence, the

medications should possess *Lekhana* properties. Along with *Amapachana*, *Agni Deepana* drugs are needed for breaking the *Sanga*, *Atipravritta* type of *Srotodushti*. While describing the features of *Yapya Vyadhi Charaka*, it is said, "*Patya Sevaye Alpa Sukham*" (survive by wholesome regimen).<sup>[21]</sup> Correct diet and lifestyle are also essential in the treatment regimen.

### General Line of Treatment (Mulika Chikitsa)

In practice, uterine fibroids are treated with a general line of treatment (*Mulika Chikitsa*) along with specific treatment to control clinical features or complications [Figure 4]. *Mulika Chikitsa* totally focuses on eradicating tumors by attacking their pathogenesis. Here, the management initiated by *Shodhana Chikitsa* is followed by *Shamana Chikitsa* according to Ayurveda basic concepts and the line of management given for *Arbuda*.<sup>[23,26]</sup> *Vata Kapaha Shodhana* should plan as they are the main two *Dodhas* involved in *Dhatu* vitiation on this condition. Further *Srothas* purification is essential for *Rasavaha*, *Raktavaha*, *Mansavaha*, *Medovaha srotasa* (channels), and *Artavavaha Srotas* as there are *Sanga* (obstructions) or *Atipravrutthi* (excessive action) occurs in pathogenesis.<sup>[48]</sup> *Mansa Dhatu Shodhana Kriya* are also essential at this level. Once the *Shodhana* process is successfully completed, *Shamana* treatments are initiated. As uterine fibroids are *Pakvashagata* disease, *Apanavatha Shamana* is essential. By the accurate regulation of reproductive hormones, abnormal tissue metabolism of myometrium can be controlled, and menstrual abnormalities can be corrected. At the same time *Agni Deepana* treatments are essential to prevent *Ama* formation. *Lekhana* drugs act by scraping, scratching or by removal of excess *Dosha*. Therefore, *Lekhana* is said to be effective for obesity and abnormal

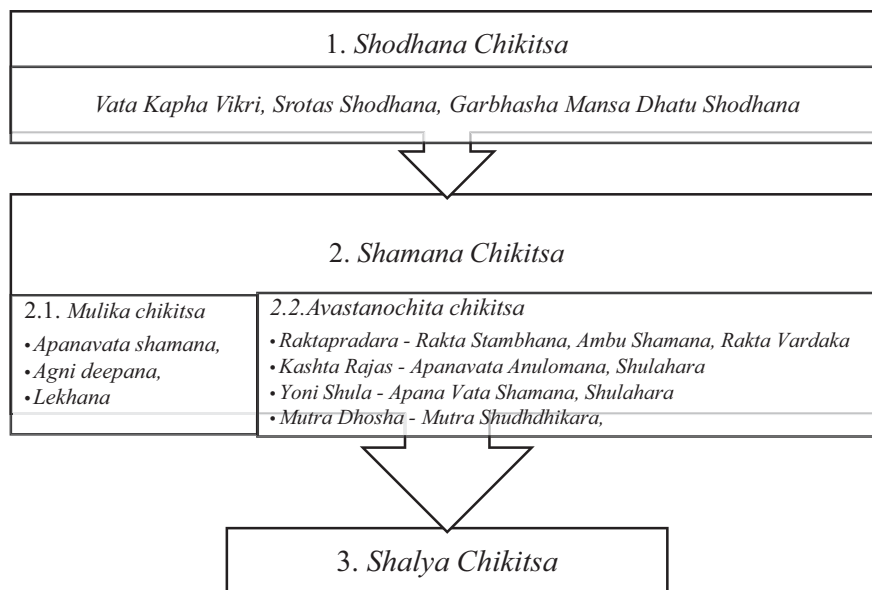


Figure 4: Ayurveda treatment approaches on uterine fibroids



growths (benign and malignant) of the body.<sup>[49]</sup> Hence, *Shamana* treatment should adopt using *Lekhana* drugs.

### Symptomatic Treatments (*Avastanochita Chikitsa*)

Along with this *Mulika Chikitsa* or general measures *Avastanochita Chikitsa* or symptomatic treatments should be also continued for the purpose of controlling signs and symptoms. These treatments can be decided according to the clinical presentations. Though Ayurveda is not clearly described for uterine fibroids, its various clinical presentations are almost addressed. Clinically, they present with a variety of symptoms: menstrual disturbances including menorrhagia, dysmenorrhea, and intermenstrual bleeding; pelvic pain unrelated to menstruation; and pressure symptoms such as a sensation of bloatedness, increased urinary frequency, and bowel disturbance. Dyspareunia and non-cyclic pelvic pain could be a result of uterine fibroids, was discussed by other studies too.<sup>[34]</sup> Menorrhagia and intermenstrual bleeding should be treated by following *Raktapradara* (menorrhagia) *Chikitsa*.<sup>[50]</sup> Astringent herbs can be used as *Rakta Stambhana* drugs (hemostats). Hormones could be balanced by using *Ambu Shamaka* measures, which are also important in menorrhagia. Further, *Rakta Vardaka* treatment is needed to correct depletion of hemoglobin level. *Apanavata Anulomana*, *Vedana Nashana* (Analgesic) treatments are needed for the cases with *Kashta Rajas* (dysmenorrhea). The same *Apana Vata Anulomana* treatments can be adapted for *Maithuna Asahishnuthva* (dyspareunia) and *Kati Shula* (noncyclic pelvic pain). *Muthra Dosha* (increased urinary frequency) associated with fibroids can be managed with the help of *Muthra Shodhaka* (urine purification), *Muthra Vaha Srothas Avarodha Hara* measures.

### CONCLUSION

It could be concluded that the condition of uterine fibroids is closely related with *Arbuda*. Pathogenesis, signs, and symptoms of uterine fibroids could be closely correlated with the description given in *Susrutha Samhita* on *Arbuda*. The property of suppuration, the presence of capsules, considered as smaller to *Arbuda* and the treatment strategy of *Granthi* are the dissimilarities between *Granthi* and this condition. Uterine fibroids could be placed as *Tridosha*, *Mansaja*, and *Yapya* disease according to various classifications of *Arbuda*. Various clinical presentations of individuals with this condition can be explained with the help of *Tridosha* involvement. The pathogenesis of uterine fibroids follows all the steps of *Shad Kriyakala*.

The treatment approach of uterine fibroids shows a close relationship with *Arbuda Chikitsa*. It should be treated with *Shodhana*, *Shaman*, and *Shalyaja* treatments as mentioned

in *Arbuda Chikitsa*. Another form of treatment for uterine fibroids is the *Mansaja* type of *Yapya Garbhashgatha Arbuda* due to the vitiation of *Tridosha*.

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### Conflicts of interest

There are no conflicts of interest.

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