ABSTRACT

Uterine fibroids are the most common benign tumours that arise from the myometrium of uterus. It’s highly prevalent in women between the age group of 35 – 45 years. The symptoms are mostly related to number, size and location of the fibroid and the common symptoms include dysmenorrhoea, menorrhagia, lower abdominal pain etc. Though direct mentioning about abnormal growths pertaining to uterus are unavailable in Ayurveda classics, two disease entities, granthi and arbuda simulate the features of such growths in general. Uterine fibroids can be considered as mamsavriddhijanya vikara and can be better correlated to mamsa granthi explained in Ayurveda. Ayurvedic classical textbooks along with available modern literatures were referred with an aim to make a clear understanding regarding the concept of Garbhashayagata mamsa granthi and its possible correlation with uterine fibroids.

Keywords. Fibroid; Granthi; Arbuda; Leiomyomas; Pradara; Sopha;

INTRODUCTION: Benign disease of the uterus is a perplexing problem for many women and their gynaecologists. The most common condition in this category is fibroids/leiomyomas, which remain asymptomatic in some, causing considerable morbidity in others. Leiomyomas are benign smooth muscle neoplasms that typically originate from the myometrium and are often referred to as uterine myomas and colloquially called fibroids. They are mainly composed of muscle tissue although there is a variable amount of fibrous connective tissue, especially in the older and larger tumours. Grossly, leiomyomas are round, rubbery tumours that when bisected display a whorled pattern. They are usually slow to grow and the rate of growth varies from patient-to-patient and from time-to-time in the same patient.

A cursory look at classical Ayurvedic literature gives ample indication that knowledge of tumours or abnormal growth of cells were known to ancient Ayurvedic physicians. Two disease entities namely, arbuda and granthi simulate the description of such abnormal growths. Both these terms refer to swelling and growths that are hard on touch and do not easily go away. In fact, they tend to grow bigger over a period of time. Together, the terms arbuda and granthi seems to represent all the tumour forming pathologies that have been described in the earliest text books of Ayurveda. Madhukosha commentary of Madhava nidana also refers granthi as something which is knotty, hard or rough in appearance. Chakrapani says that the name granthi describes its specific character that is, glandular or nodular swelling.

Charaka mentions these diseases under the group of diseases that are characterized by swelling or sopha. Sushrutha describes arbuda and granthi as diseases that need surgical management. Though there are similarities between granthi and arbuda, benign neoplasms are better correlated to granthi and malignant ones to arbuda, as they are harmful to life and fast growing in nature. Vagbhatta again differentiates both by saying that only ‘big granthi’ can be considered as arbuda.

MATERIALS AND METHOD:

Ayurvedic classical textbooks, modern medical textbooks, online articles
and journals were reviewed to gain all the possible information regarding this topic and the information was critically reviewed to arrive at the following observations.

**OBSERVATIONS:**

In Ayurveda, gynaecological diseases are mentioned under vimshathi yoni yogas. Fibroids being muscular in origin, with slow growth may be better compared to mamsa granthi occurring in garbhashaya. Charaka explains that granthi, arbuda or sopha takes the name after the site where it develops. So uterine fibroids can be named as ‘Garbhshayagata mamsa granthi’.

According to Sushrutha, vitiated Vata, Pitha, Kapha doshas vitiating mamsa, rakta and medas mixed with Kapha produce rounded, protuberant, knotty and hard swelling. Since it is knotty or glandular it is called granthi. Commentator Dalhana had also divided this etiopathogenesis into two parts i.e. aggravated Vata etc doshas involving mamsa and rakta produce Vataja, pithaja and kaphaja granthis, whereas aggravated Vayu along with medas mixed with Kapha produces medojagranthi. Bhoja had also accepted Vayu as a causative factor for medoja granthi. Commentator Gayadasa had also accepted that pathogenesis of medoja granthi is different. Both Vagbhhattas accept the views of Sushrutha and Dalhana and have held Vata etc. doshas dominated by Kapha as responsible for this disease. It is also included among disorders of increased mamsa and medas.

**Diseases in classical texts resembling Uterine Leiomyoma**

**Arbuda**

The word Arbuda is derived from root word, “arb himse” that means a condition which is harmful or kills the affected person. Amarakosha explains arbuda as “aram bundati”, where Aram means fast/speedy and bundati means ‘to perceive’. So according to Amarakosha, arbuda is something which is ‘perceived very fast’, which denotes its fast growing nature. Considering all the definitions of arbuda, it is clear that the disease is fast growing in nature and is harmful or kills person affected by it. So arbuda can better be compared to malignant growths rather than benign growths. Malignant transformations occur in uterine fibroids, but the rate is as low as 0.1 percent, so fibroids are better compared to granthi rather than arbuda.

**Vidradhi**

Due to the triggering factors for the vitiation of the doshas including rakta, the doshas get vitiated and localises in the twak, mamsa, medas, asthi snayu and rakta, and produce a localized swelling either outside the body or in the visceral organs, which is deep rooted with broad base, round or diffused in outline with suppuration (sighra vidaha) and extremely painful (thivra vedana). The sites of Vidradhi formation includes rectum, bladder neck, umbilicus, flanks, groins, kidneys, spleen, liver, heart and kloma. The internal Vidradhi resembles gulma and is elevated like an anthill and there will be firm intrusion into the dhatus, and the supplicative changes is due to the involvement of rakta and mamsa. In fibroids usually suppuration does not occur, so it cannot be correlated to vidradhi. But in certain sub mucous fibroids, suppuration, degenerative changes and inflammation occurs, and considering these aspects it can be taken as anthar Vidradhi.

**Gulma**

Gulma is derived from the root ‘gud’ which means fastening around a thing or protecting by tying. Due to unwholesome practices including diet and regimen which lead to the vitiation of Vata, with the involvement of other doshas and or with rakta invade the mahasrothas, especially in the most vulnerable area for the localisation and manifestation of disease, blocking the channels of doshas, both the upward and downward and gives
rise to palpable (sparsopala-bhyam), elevated hard mass (utpluta, granthi roopa), preceded by pain in the abdomen is known as gulma. As these symptoms are seen in fibroid, it can be viewed under the perspective of Gulma also.

**Sopha**

Sopha means a swelling or distension. In Charaka chikitsa the nidana for sopha are mentioned, due to these triggering factors Kapha and Pitha enter the external vessels and afflict Vayu located there. As a result of these factors, the passage (channels of circulation/srotas), gets obstructed which spreads to the nearby areas, thereby causing oedema characterised by swelling. Charaka mentions various conditions characterised by sopha/swelling and granthi is one among them.

**Pradara**

Due to excess excretion of menstrual blood, it is called Pradara. Four types of Pradara has been explained in the classical texts and according to Sushrutha when menstruation comes in excess amount for prolonged period, and or even without normal period of menstruation and different from the features of normal menstrual blood or denoting the features of specific dosha is called Pradara. Thus the stage of heavy menstrual bleeding in fibroid can be correlated to Pradara.

**Nidana of Garbhashayagata Granthi:**

According to basic principles of Ayurveda, there is no disease without the vitiation of doshas and hence nidana of garbhashaya mamsa granthi also includes all the factors responsible for vitiating Vata, Pitha, Kapha and the nidana that are especially mentioned for mamsa granthi. Charaka while explaining about Granthi, had included the same along with Svayathu and had mentioned that granthu is also characterised by sopha/swelling. So all the factors responsible for Svayathu can also be considered as etiological factors for Granthi. Fibroids occur exclusively in uterine myometrium, so the factors responsible for Yoni Roga (Yoni Roga nidana) can also be considered here.

**Purvarupa:**

Premonitory signs and symptoms include dushti lekshana of all the doshas, dhatus and the srotas involved. Since Charaka considers these diseases under the group of diseases characterised by swelling/sopha, so signs and symptoms of sopha can also be considered as the Purvarupa of granthi.

**Rupa:**

Manifestation of symptoms depend on the extent of vitiation of doshas and mamsaja granthi is usually smooth (Snigdha), big (mahantham), and hard (katinam), covered with net of veins (siranandham) and also shows the features of Kaphaja granthi. Features of Kaphaja granthi includes, cold in touch (sheetam), skin coloured or very slightly discoloured (avivarnam), slightly painful (alpa ruja), has intense itching (ati kandu), is stony hard and big (pashanavat), increases gradually (chiraabhivridhi) and on rupture discharges white thick pus (sravet Shukla Ghana puya). 

**Samprapthi of Garbhashaya Granthi**

Samprapthi denotes the process of pathogenesis of a disease and according to Vagbhatta, in the pathogenesis of all diseases, vitiated Doshas are the main factor which produce the pathology. They first get locally vitiated and then travel through the circulatory system and get to the organ and system which has already
latent weakness, inherent or acquired, settle down there and start the peculiar morbid changes there, according to their peculiar nature, and the result is a specific disease bearing signs and symptoms relevant to the responsible Doshas, Dhatus, srotas and organs, denoting organic and functional changes. The same process takes place in the manifestation of uterine leiomyoma also.

Doshas get vitiated due to the above mentioned samanya nidanas and the latent weakness in the garbhashaya may be the result of yoni roga nidana sevana like mithyachara, Vishamanga shayana, Brisha maithuna, Dustarthava, Introduction of apadravya into yoni, beeja dusti or daiva.

The factors involved in the Samprapthi of garbhashaya granthi includes:

Dosha : Vata Kapha pradhana tridosha
Dushyas : Rasa, rakta, mamsa, meda
Roga marga : Abhyanthara
Agni : Mandagni
Sthana : Apana Vata
Srotas : Rasa, rakta, mamsa, meda, artava vaha

Prognosis of Granthi

Vagbhatta states that vataja, pithaja, kaphaja, raktaja and medoja granthis are curable. While mamsa, Sira, and Vrana granthis are yapya, those situated in vital parts, throat, abdomen and those which are thick, rough etc and Asthi granthi are incurable. Sushrutha states that tender and mobile Sira granthis is krichra sadhya while, painless, broad based, non-mobile granthis present in vital parts are incurable.

According to Charaka the granthi located in kukshi (flanks), udara (abdomen), gala (neck), marma (vital parts), those granthis which are sthoola and khara (thick and rough), and of children, debilitated and aged ones are incurable. The term kukshi can be approximated to uterus, since while referring to formation of Garbha, Charaka had made a statement that ‘sukrasonitha jevasamyoge khalu kukshi gate Garbha’. In the commentary Chakrapani Dutta had described kukshi as garbhasaya.

Management of Granthi:

Uterine fibroids are better compared to mamsa granthi in garbhashaya and hence management protocol of mamsa granthi can be applied generally. Clinical manifestation of uterine fibroids varies from patient to patient with various signs and symptoms and hence management principles of these symptoms can be adopted appropriately after analysing the condition of the patient and the disease. Samprapthi vighattana can be effectively made possible by adopting measures that will help to remove the vitiation of involved doshas, dhatus, srotas etc. Hence to concise management principles of Mamsa dhatu Vridhi, Sopha, Gulma, Vidradhi, Asrugdara etc can be adopted according to condition of the patient and manifestation of disease.

Mamsa Vridhi chikitsa

Diseases due to increase of mamsa dhatu are to be treated with sastrakarma, kshara karma or Agni karma.

Sopha Chikitsa

Charaka in chikitsa sthana twelfth chapter describes treatment of sopha and the same can be adopted in granthi too.

Granthi

In the Ama stage of granthi, the physician should adopt the treatments indicated for sopha. The strength of the patient should be protected constantly because in turn it controls the strength of the disease. In granthi, sodhana, poultices and application of other beneficial drug is recommended.
That which is not become ripe, should be cut (excised) and when bleeding stops it should be burnt by fire (thermal cautery) leaving no residue or remnant, because such a remnant is sure to develop again into tumour.

The tumours which are not present on marma and unripe should be excised in its unripe stage and removed. The site should be cauterised and after bleeding stops, the treatment mentioned for fresh wound should be done.

Infamed granthi not situated in any vital part should be enucleated followed by cauterization, scraping with instrument and application of kshara. Granthi not cured with medicine should be enucleated with instruments and thus produced wound should be dressed with Jathyadi Ghṛta.

After incising suppurated granthi wound should be cleaned and treated for healing. After excising well suppurated granthi wound should be immediately washed with beneficial kashayam and thick layer of honey and Ghṛta mixed with kshara should be applied for cleansing. After proper cleansing of wound, irrigation with oil medicated with vidanga, patha and rajani should be done.

Mamsa Medo granthi
Both Vagbhattas say that mamsa and medo granthi should be treated as the same way of kaphaja granthi. Charaka while describing mamsa and Medo granthi chikitsa, states that ‘Vipadanam chedhanam sa kosham sastrena dahanam’ that is to excise and remove along with the capsule with the help of sharp instruments.

Gulma
The Vata gulma which is caused by rough articles and exercise and has intense pain with obstruction in faeces and flatus should be managed, at first, with medicated oils. The patient should be given taila pana, anuvasana, abhyanga, then the physician should apply fomentation for alleviation of the gulma. The application of fomentation after snehana in the patient softens the channels, overcomes the aggravated Vata, breaks down the obstruction and thus alleviates the gulma. If on Vata having been overcome, or during its treatment kapha, pitha or rakta gets aggravated, the case should be managed according to predominance of dosha protecting the condition of Vata always.

Arbuda chikitsa: According to Vagbhatta arbuda chikitsa is very much similar to granthi chikitsa.

Vidradhi: All type of vidradhi which are in ama state should be treated similar to sopha. Rakta mokshan can be done repeatedly. When these become pakva, treatment similar to vrana can be done.

In the non-inflammatory stage of antharvidradhi, decoction of varunadi gana with ushakadi prativapa should be given. Medicated ghee can be given for purgation. Niruha and anuvasana vasthi should also be given. The internal administration of madhusigrur for pana, bhojana, lepa is beneficial.

Anthar vidradhi should be treated like gulma in all ways. In the various stages of disease, guggulu, silajathu, nagara churna etc can be given with appropriate decoctions. Siravedha is also beneficial.

Asrugdara
The treatment prescribed for raktatisara, raktapitha, raktarsha, guhya roga and vatala yonirogas should be done in Asrugdara. If the patient is strong enough then the impure blood that is going out need not be stopped and if the patient is weak it should be stopped using raktasthambanopayas, else it will kill the patient quickly.

Considering all the above mentioned management aspects treatment principle of Garbhashaya granthi can be concised as:
- Treatment principle of granthi in general and in absence of other complications like increased bleeding, pain etc.
- Since uterine fibroid is a mamsa vridhijanya vikara, mamsa vridhi chikitsa can be done.
• When there is abdominal discomfort *gulma chikitsa* can be adopted to alleviate symptoms like pain, heaviness of abdomen etc.
• When there is menorrhagia associated with leiomyoma, *Asrugdara* treatment protocol can be adopted to reduce the bleeding associated with menstruation.
• If there is inflammation/ suppuration associated with fibroid *anthar vidradhi chikitsa* can be followed to alleviate the symptoms associated with inflammation.
• If all the medical management fails surgical management can be employed.

**DISCUSSION:**

Although there is no direct description about fibroids in Ayurveda, two disease entities namely, *arbuda* and *granthi* simulate the description of such abnormal growths. The terms *arbuda* and *granthi*, together seems to represent the entire tumour forming pathologies that have been described in the earliest text books of Ayurveda. *Granthis* can be better compared to benign neoplasm and *arbuda* to malignant ones as they are harmful to life and fast growing in nature. Vagbhatta differentiates both by saying that only big *granthi* can be considered as *arbuda*. Charaka includes both these conditions under the group of diseases characterized by *sopha*. Fibroids being mostly muscular in origin, can be correlated to *Garbhashayagata Mamsa granthi* and the following points substantiate the correlation,

• *Granthis* is a *mamsa vridhijanya vikara*, similarly fibroid is also muscular in origin.
• Diet capable of increasing *mamsa dhatu*, mentioned as major cause for *Mamsa granthi* by Vagbhatta. Studies now confirm that the incidence of fibroid is more in women accustomed to consume red meat and ham.
• *Mamsa granthi* is ‘avivarman’ in appearance similarly fibroids are also pale in colour.
• They are ‘Katina’ or firm in consistency. Fibroids are rubbery mass with firm consistency.

• According to Sushruta’s definition for *granthi*, it is *vritta* or round, similar to structure of uterine fibroids explained by modern science.
• Charaka while explaining about the surgical management of *granthi*, has mentioned the removal of ‘*sakosha granthi*’ which means *granthi* should be removed along with the capsule (*Kosha*) around it and then the wound should be treated like *vrana*. Fibroids are also covered with a thin layer of connective tissue on its outer surface and this forms the plane of cleavage during surgery.

• *Mamsa granthi* is said to be ‘*siranadham*’ i.e. covered with *sira*. Vessels that supply blood to the tumour lie in the outer capsule and send radial branches into the tumour giving an appearance of ‘covered by network of veins’.
• *Mamsa granthi* is painless or having slight pain similar to fibroids.
• *Mamsa granthi* is big in size similar to fibroids which may also attain larger size
• *Mamsa granthi* is slow growing (*Chira abhivridhi*) similar to fibroids.

**CONCLUSION:**

Leiomyomas are benign uterine tumours of unknown etiology believed to arise from myometrial cellular transformation. While majority of fibroids remain asymptomatic, symptomatic ones present with bleeding, pain, pressure, or infertility. Though there are no direct correlations for uterine fibroid available in ayurvedic classics. Can be better correlated to *Garbhashaya mamsa granthi* based on the symptoms and etiopathogenesis. Management protocol of *Mamsa granthi* can be adopted with modifications according to clinical manifestation seen in the patient.

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