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An ayurvedic review of *granthi* with special reference to uterine fibroid.

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ABSTRACT

Uterine fibroids i.e. leiomyoma are common benign smooth muscle tumors of the uterus. It can cause significant morbidity in women of a reproductive life span and adversely impact fertility. Uterine fibroids are clinically apparent in up to 25% of female population over the age of 35-39. The most likely presentation of fibroids is by their effect on the woman's menstrual cycle or pelvic pressure symptoms. The postmenopausal incidence of leiomyomas was no lower than the premenopausal incidence, although postmenopausal leiomyomas were smaller and fewer. The management of uterine fibroids can be approached medically, surgically and even by minimal access techniques. The main goal of Ayurvedic management is *Samprapti Bhanga* of *Granthi*.

Key words: Uterine fibroids, *Granthi*, *Samprapti Bhanga*.

INTRODUCTION:

Now a days there is a steady rise in gynaecological disorders. Among these Uterine fibroids are most commonly seen. Uterine fibroids are non cancerous tumors that grow within the wall of the uterus. Fibroids, known technically as leiomyomata, can vary in size and numbers. These are accompanied by infertility, miscarriage and early onset of labour. According to WHO 2% of miscarriage was associated with fibroids and 1.8% of the infertilities are due to fibroids. Smooth muscle monoclonal neoplasm of uterus arising in the myometrium and sometimes ligament attached. These tumors are highly sensitive to Oestrogen. They develop following the onset of menstruation, enlarge during pregnancy and regress after menopause when Oestrogen with levels are decrease by half. In Ayurvedic classic the "*Granthi*" can be related to uterine fibroid. *Granthi* when present in *Yoni* or *Garbhashaya*⁴ will lead to disturbed menstrual cycle menorrhagia, metrorrhagia, dysmenorrhoea etc, along

with the infertility. *Acharya Sushruta* has described the diseases of similar observations and symptoms³ like *Granthi*, *Arbuda*, *Gulma* etc. *Ayurvedic Samhitas* have described *Mamsaja Granthi* which perfectly correlates with benign neoplasm in modern medical science.

Ayurvedic practitioners must make an attempt to understand the diseases and explore treatment option using basic principle of *Nidan* and *Chikitsa*.

CAUSES OF UTERINE FIBROID⁵ -

- Age - Rare before 20 years and most commonly found after 35 years.
- Parity- Common in nulliparous , oligoparous and relatively infertile women.
- Racial- African, American ethnicity associated with 3-9 times more prone than Asian.
- Genetic - plays very important role in fibroid development.
- Changes in Oestrogen and Progesterone level.
- Late pregnancy and multiple pregnancies.
- Lifestyle related causes - stress, obesity, diet.

SYMPTOMS OF UTERINE FIBROID⁵:

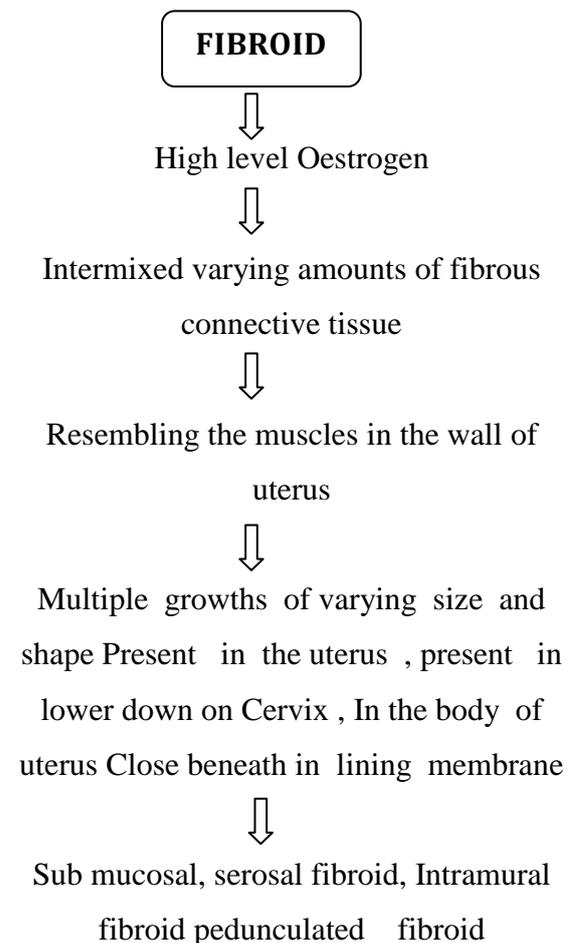
- Menstrual- like menorrhagia, acyclic bleeding, spasmodic/congestive dysmenorrhoea.
- Pain in the back and legs. Pain during sexual intercourse.
- Urinary symptoms - Bladder pressure leading to a frequent urge to urinate, nocturia.

- Pressure symptoms- pressure on the bowel, leading to constipation and bloating.
- Pressure on ureter- Hydroureter, hydronephrosis.

PATHOPHYSIOLOGY⁶-

The aetiology of uterine fibroid remains unclear. But the most likely it arises from neoplastic single smooth muscle cell of myometrium. But the responsible factors for uterine fibroids are

- 1) Chromosomal abnormality particularly in 6th or 7th chromosomes.
- 2) Role of polypeptide growth factors i.e. EGF (epidermal growth factor), insulin-like growth factors, TGF (transforming growth factors) stimulates the growth of fibroid directly or via oestrogen.
- 3) Positive family history



Types of Uterine Fibroid-

Uterine Fibroids are classified by their location.

1) Subserosal Fibroids-

Located outer wall of the uterine cavity and in serosal covering of the uterus and expand outward through the wall. They typically do not affect a woman's menstrual flow, but can cause pelvic pain, back pain and generalized pressure. The subserosal fibroid that can form a stalk on which the mass is attached termed pedunculated fibroids.

2) Intramural Fibroids-

The word "mural" means "wall". An intramural fibroid is one that arises within and remains in the wall of uterus. These fibroids are the most common type of fibroid. Located in the thick wall of the uterus (myometrium). These develop within the lining of the uterus and expand inward. Many intramural fibroids do not cause problems unless they become quite large.

3) Submucosal Fibroids

They are located inside the cavity of the uterus. These are located in muscle beneath the lining of uterine wall (endometrium).

These are the least common fibroids, but they tend to cause the most problems. They can cause heavy bleeding, long period and irregular bleeding between the cycles.

Differential Diagnosis-

1. Endometrial Polyp
2. Endometrial Hyperplasia
3. Endometrial Cancer
4. Pregnancy

Possible Complications

- Severe pain or very heavy bleeding that needs emergency surgery.
- Twisting of the fibroid- can cause blocked blood vessels that feed the tumor needs surgery.
- Heavy bleeding with anaemia is the most common.
- Urinary tract or bowel obstruction from large parasitic myoma is much less common.
- Infertility, in rare cases.
- Pregnancy complications e.g. abortion and preterm labour pain, malpresentation.
- Ureteral injury or ligation is recognized complication of surgery for cx myoma.

Ayurvedic Aspect Of Granthi In Relation To Uterine Fibroid

Ayurveda is an ancient Indian system of medicine that deals with various type of diseases and makes use of herbs existing in the nature and formulates herbal remedies using the inherent power present in these herbs. According *Aacharya Charaka*, the clinical features of *Granthi* are different and they are described in *Shotha Adhyaya*¹. *Aacharya Sushruta* says that main clinical features of *Granthi*³, *Vidradhi* and *Alaji* are swellings or protuberance. According to *Vagbhata*², Uterine fibroids are growths in *mamsa dhatu* of uterus (growth in muscular tissue of uterus).

In *Amarkosha*, root word "*Grathi Kautilye*" has been mentioned which means tortousness. From this another word "*Granthita*" is derived which means tying or stringing. It is a *kapha* dominant

disorder, other two *doshas* such as *pitta* and *vata* are also involved but in lesser degree. Localized nodular swelling has been referred under the name of *Granthi*. It is hard and tough, glandular or nodular swelling in appearance. *Granthi* when present in *yoni* (female reproductive system) / *Garbhashaya* (uterus) will lead to disturbed menstrual cycle-*menorrhagia*, *metrorrhagia*, *dysmenorrhoea*, etc., along with infertility. Such clinical entity is diagnosed today as Uterine fibroid. According to *Dalhana*, *Vata Dosha (Apan vayu)* is the predominant pathological factor for development of *Granthi*. In *Ayurvedic* literature total, nine types of *Granthi* have been mentioned depending upon the pathological factor, and the body tissue involved. Fibroids can be related to the “*Granthi*” mentioned in *Ayurvedic* texts, and it can be managed according to the principle of *Samprapti Vighatana* (to break the pathogenesis).

Pathogenesis (*Samprapti*) Of *Granthi*

Pathogenesis of *Granthi* is propounded as when morbid *Tridoshas*, vitiate *Rakta* (blood), *Mamsa* (fleshy/muscles), and *Meda* (fat/adipose tissue) that are admixed with *Kapha* produce rounded protuberant, knotty or glandular and hard swelling called *Granthi*. Etiopathogenesis, clinical features and treatment of *Granthi*, are identical to the *Granthi* of any other body part.

- *Vataja granthi* which are elongated and usually painful sub serous fibroid can become very large even wondering
- *Pittaja granthi* are more prone for suppuration and inflammation as this distort the uterine cavity, it can

be considered as sub mucosal fibroid.

- *Kaphja granthi* are with mild pain, localized mass cervical and intramural fibroids can be understood.

Samprapti of Granthi

Vitiated *Tridosha*



Vitiated *mamsa, rakta medas* mixed with
kapha



Produces rounded, protuberance and hard
swelling



Granthi

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