



Review Article

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A REVIEW ON CONCEPT OF GULMA IN AYURVEDA WITH SPECIAL REFERENCE TO INFLAMMATION AND PAIN

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ABSTRACT

Gulma is a disease entity attributed to Vata (a body humour) and covers various Gastro-intestinal and Gynecological diseases, but its diagnosis becomes difficult, due to its complex Clinical presentation. Hence, it's essential to understand Gulma in a comprehensive way for accurate and easy diagnosis. Classical texts of Ayurveda, especially Charaka Samhita, were surveyed keenly along with Sanskrit commentaries to collect the related references. A thorough search was made on Internet to fetch previous research works and relevant information. Gulma has deep interrelationship with Shotha (Inflammation) and Shula (Pain). Deranged Agni (Digestion & Metabolism) and Emaciated Dhatu (Tissues) are the chief causative factors, which provoke Vata either by increasing its Ruksha Guna (Dryness) or by obstructing its functioning (Avarana) by other subtype of Vata /Puresha (feces) / Mootra (Urine) / Kapha (a body humour) / Pitta (a body humour) & Aama (improperly or incompletely metabolized entities). Gulma is a self-contained, shrub like conglomeration of Dosha, mainly provoked Vata Dosha. It may be located superficially or deep inside Thoraco-abdominal cavity and may or may not be palpable. The basic phenomenon responsible for pathogenesis of Gulma is Shotha and Cardinal Symptom is Shula. Vikriti Vishama Samaveta (VVS where the effect may not be exactly in accordance of the cause) types of Gulma require specific treatment in compare to Prakriti Sama Samaveta (PSS where the effect is exactly in accordance of the cause) type.

Keywords: Charaka Samhita, Prakriti Sama Samaveta, Vikriti Vishama Samaveta, Trishothiya adhyaya, Phantom tumours, Cancer

INTRODUCTION

Gulma is one of the diseases having very complex Clinical presentation. It's merely being compared with abdominal lump or uterine fibroids, but that's neither accurate nor sufficient. The meaning of the word "Gulma" is a cluster or clump of trees, thicket, bush or shrub¹. The word is found in various ancient Indian texts, denoting the same meaning.^{2,3} In Ayurveda, Gulma is considered as a disease caused by aggravated Vata (One of the three basic humors of body). The nomenclature of the disease itself indicates that Avritta Vata (Covered or Obstructed movement/ functioning of Vata) is its root from which several branches in form of various diseases arise⁴. That's why comprehensive knowledge of form, location and features of the disease is inevitable for correct diagnosis and treatment.

Classical texts of Ayurveda, especially Charaka Samhita, were surveyed keenly along with Sanskrit commentaries to collect the relevant references and achieve depth in the concept. A thorough search was made on the search engine Google, Bing, Pub Med and AYUSH Portal regarding the topic, using the keywords – Gulma, Charaka Samhita, Prakriti Sama Samaveta, Vikriti Vishama Samaveta, Trishothiya adhyaya, Phantom tumours and Cancer etc. Also, various text books and published power point presentations were checked to fetch important points.

REVIEW OF PREVIOUS RESEARCH WORKS

Few studies have been carried out on different aspects of the concept. Among them, one study has been done on surgical aspect

of Gulma in Ayurveda⁵ where it is compared with abdominal lump, Ilio-caecal tuberculosis & Uterine fibroid, but description according to Charaka Samhita and literary depth were lacking. Another study related several diseases with different types of Gulma, but relation of Gulma with Shotha (Inflammation) and Shula (Pain) was not mentioned in detail.⁶ One another study compared Gulma with Tumour and Gastritis, but all other Ayurvedic aspects were left untouched.⁷ Several other studies have been carried out on Cancer, mentioning relationship between Gulma and Cancer up to some extent^{8,9}, but they cover least part of the disease. Some studies on specific formulations for the management of Gulma were also found, not putting emphasis on fundamental depth.

Literary review

Gulma is a densely accumulated, almost rounded, bubble like mass of Dosha (Bodily Humours), specifically Vata Dosha.¹⁰ It may be in a single or multiple mass, which may or may not freely move within the cavity of its growth¹¹. When Gulma becomes too much dense, its overlapping muscles and skin also appear to be elevated¹², as if otherwise, it cannot be examined by inspection.

SAMPRAPTI GHATAKA (FACTORS OF PATHOGENESIS) OF GULMA

Diminished Agni (Digestive fire) is the essential cause amongst all. Gulma is Nirashraya, means no Dhatu (tissue) is involved in its pathogenesis until it becomes chronic & severe (Kritavastuparigraha state) and starts suppurating¹³. Ashtang

Hridaya and Ashtang Samgraha only have mentioned possibility of involvement of Rakta Dhatu (Blood tissue) in pathogenesis of Doshaja Gulma^{14,15} (Gulma primarily caused by dosha).

Samprapti (Pathogenesis) of Gulma: The actual pathogenesis of Gulma is mentioned in Sutra Sthana of Charaka Samhita, as a Vatika Ekadeshiya Shotha (Localized Inflammation caused by Vata), which is painful¹⁶.

Table 1: Relation between Shula (Pain) & Gulma¹⁷

No.	Classical Text	Gulma	Shula
1.	Sushruta samhita ¹⁸	Vyadhi (Disease)	Upadrava (Complication)
2.	Ashtang Samgraha ¹⁹ Ashtang Hridaya ²⁰	Upadrava (Complication)	Purvarupa (Prodromal symptom)
3.	Charaka Samhita ²¹	Intermingled phenomena	

Hence, it can be said that the basic phenomenon of pathogenesis of Gulma is Shotha (Inflammation) and the Cardinal Symptom is Shula (Pain).

Diagnostic criteria

Being a cardinal symptom of this Vatika disease, Vedana or pain has been additionally mentioned with Nidana panchaka (Diagnosis pentad) of Gulma²² while Samprapti has been intentionally obliterated and is included within Linga (Symptoms) of Gulma²³.

TYPES OF GULMA

In Nidana Sthana of Charaka Samhita five types of Gulma have been mentioned, viz. Vataja, Pittaja, Kaphaja, Raktaja & Nichaya (Gulma caused by all the three bodily humours)²¹. But in Chikitsa Sthana of the same treatise, additional 3 Dwandwaja Gulma (Gulma caused by two provoked humours) have also been indicated, specifically due to their distinct modes of treatment²². Nichaya Gulma has been termed as “Nichaya” instead of “Sannipata” to illustrate its incurable nature²³.

As per Madhava Nidana²⁴ and Ayurveda-Deepika²⁵, another type of Raktaja Gulma manifests in males, which is caused by vitiation of Rakta Dhatu instead of Artava (Menstrual fluid).

Lakshana (Signs and Symptoms): Location, Signs & symptoms, pattern and timing of pain vary in accordance of the dominant Dosha. For example, Pain of Vataja Gulma increases at the end of digestion process while it pacifies on taking meals. This can be considered as an important reference of Parinama Shula (Pain in abdomen at the end time of digestion) in Charaka Samhita.²⁶

DISCUSSION

The prime Dosha in generation of Gulma is Vata. Any type of Vata, especially Apana and/or Samana type of Vata alone or with Pachaka Pitta / Kledaka Kapha can initiate the pathogenesis. Amshamsha Kalpana (Properties of Dosha responsible for provocation) can be assumed as follows

Table 2: Amshamsha Kalpana in Pathogenesis of Gulma

1.	Vata	Ruksha (Dryness)
2.	Pitta	Ushna (Hotness), Snigdha (Unctuousness) / Ruksha (Dryness), Tikshna (piercing intensity)
3.	Kapha	Guru (Heaviness), Sthira (steadiness)

Specific Nidana: When a person is exceedingly emaciated due to chronic fever, excessive elimination of Kapha/ Pitta / Pureesha (faeces) through Panchakarma or diarrhoea, he becomes prone to develop Gulma easily²⁷ as in this condition, Vata gets provoked due to Dhatukshaya (emaciation of various bodily tissues).

Avarana of Vata is indicated by Pureesha (feces) / Mootra (Urine)/ Kapha/ Pitta & Aama (improperly or incompletely metabolized entities) too²⁸. In accordance of the same, the etiological factors mentioned in both Sthana also differ²⁹.

Difference in pathogenesis mentioned in Nidana & Chikitsa Sthana of Charaka Samhita

In Nidana Sthana, only elevation and provocation of Vata have been emphasized. Here, provoked subtype of Vata itself causes Avarana of another subtype of Vata. While in Chikitsa Sthana,

Sites of Gulma: Acharya Sushruta has described the site of Gulma in brief, between Hridaya and Basti, which actually covers entire abdomen³⁰. He has also used the term Koshta to indicate overall location³¹. Acharya Charaka has mentioned five locations³², which broadly cover whole thoraco-abdominal cavity.

Table 3: Locations of Gulma

S. No.	Sthana	Body part	Dosha/ Dhatu involved
1.	Basti	Urinary Bladder and lower abdomen	Vata
2.	Nabhi	Para-umbilical region	Pitta
3.	Hridaya	Cardiac region, Fundus of Stomach	Kapha
4-5.	Parshwa (2)	Laterals of:	
	i. Basti Parshwa	Uterus/ inguinal regions	Vata, Rakta
	ii. Nabhi Parshwa	Large Intestine	Vata, Pitta
	iii. Hridaya Parshwa	Lungs / Liver / Spleen	Vata, Pitta, Kapha and Rakta

Deep comprehension of Ayurvedic Anatomy gives a unique vision to understand the distinct Physiology as well as Pathology mentioned in texts of Ayurveda. While mentioning the

Physiological process of Urine formation, Acharya Sushruta has use the word Pakwashaya as a synonym of Kidney³³. Here, the Renal cortex can be considered as Aamashaya as in this part,

Urine is not formed completely. On the other hand, renal medulla can be taken as Pakwashaya, as it contains completely formed Urine, i.e. Pakwa Mootra. Same way, in prodromal symptoms of Chardi (Vomiting), Acharya Charaka has used the word Hridaya in sense of Stomach³⁴. On keen observation of etiological factors, pathogenesis and symptoms of Kaphaja Gulma, it seems that, according to Gobalivarda Nyaya (a maxim used to select one meaning of a word amongst several)³⁵ here, Hridaya word should be interpreted as either whole Cardiac region or Fundus of the stomach. Thus, fundus of Stomach can be considered as a site of Kaphaja Gulma, while the lower part is the site of Pittaja Gulma. Again, the word "Parshwa" should be considered as laterals of Basti, Nabhi and Hridaya to cover up the sites of both types of Raktaja Gulma, Swatantra Gulma (independently caused by Vata) as well as Phantom tumors seen in lungs.

Samanya Poorvarupa³⁶ (Prodromal symptoms)

Acharya Charaka has mentioned Anannabhilasha (no desire to take food)³⁷, Aruchi (desires but can't take food)³⁷, Abubhuksha (loss of appetite), Avipaka (indigestion) and Agnivaishmya (irregular digestion and metabolism), all together as prodromal symptoms of Gulma, which points towards extremely major role of deranged Agni (digestive fire) in pathogenesis of Gulma. Other prodromal signs and symptoms are due to provocation of Vata. But for the purpose of pin point diagnosis, two peculiar prodromal symptoms are to be concerned

- Vomiting / belching at the time of completion of digestion without any apparent cause
- Sauhityasya asahatvam or Triptakshamatva³⁸, means patient cannot take food up to the level of optimum satiety.

Both the prodromal symptoms may be caused by stretch reflex. This condition may be compared with Vyana aavritta Apana (Vyana Vata obstructs downward movement of Apana Vata). Parasympathetic and sympathetic stimulation from brain can affect gastro intestinal activity mainly by acting on intramural plexus. This function can be attributed to Apana. Strong sympathetic stimulation (function of Vyana) inhibits peristalsis and increases the tone of sphincters. This can be considered as Avarana of Apana by Vyana. As a result, the food remains in stomach or early part of small intestine which send the stretch impulse to vomit centre causing the vomiting as well as intolerance of satiety³⁹.

Pain, as a symptom, always remains associated with Gulma, but surgery may be required when pain becomes extreme and unbearable. Such an intense pain is mentioned by Sushruta Samhita as a complication of Gulma. On the other hand, he accepts existence of Shula without Gulma also and hence has attributed a specific chapter to it. Charaka Samhita and Vagbhata Samhita have incorporated Shula in Gulma and hence not given separate chapter on it. Ashtang Samgraha and Ashtang Hridaya have mentioned Gulma after description of Vidradhi (Abscess like disease) and Vriddhi (Variants of Orchitis). Hence, rather on emphasizing on initial Doshaja stage of Gulma, they have mentioned nodular form of Gulma, having involvement of Rakta Dhatu in its pathogenesis. In this case, the earlier clinical symptom will be pain and Nodular form of Gulma will appear much later. That's why, Vagbhata have considered pain as a prodromal symptom and Gulma as a complication of its repeated occurring. Estimation of Acharya Charaka sounds to be in accordance of Samprapti janana (process of pathogenesis), which is essential to be understood for Samprapti Vighatana.

Types of Gulma: Difference in number of types of Gulma mentioned in Nidana & Chikitsa Sthana is due to the principle of

Prakriti Sama Samaveta (PSS where the effect is exactly in accordance of the cause) and Vikriti Vishama Samaveta (VVS where the effect may not be exactly in accordance of the cause)⁴⁰. In Nidana Sthana, three PSS Dwandwaja Gulma have not been mentioned, because their causes as well as treatment can be estimated in accordance of the individual Humours involved in the pathogenesis. But in Chikitsa Sthana, other three VVS Dwandwaja Gulma have been counted separately, because their causes, signs & symptoms and treatment cannot be assumed on the basis of individual Humours⁴¹.

CONCLUSION

Gulma is a self-contained, shrub like conglomeration of provoked Vata Dosh, located superficially or deep inside thoraco-abdominal cavity and may or may not be palpable. The basic pathogenesis of Gulma is Shotha and Cardinal Symptom is Shula. Tissues may get involved in later stage of its pathogenesis. Extremely deranged status of Agni and exceeding emaciation are specific causes in generation of Gulma. Thus, it is generated by Avarana of Vata by another sub-type of Vata or Pureesha (Stool)/ Mootra (Urine)/ Kapha/ Pitta & Aama (Undigested substances). Vikriti Vishama Samaveta types of Dwandwaja Gulma require specific treatment in compare to Prakriti Sama Samaveta type.

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