



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Guda Marma: A Review of Classical Concepts and Modern Anatomical Correlation

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Abstract: Marma is specific location on the body identified as vital region where life force energy known as Prana, reside. All Acharyas have enumerated 107 Marmas, which are further classified into five categories based on its classification, location, size, injury effect etc. Guda Marma is one of 107 Marma described in the literature of Ayurveda. Guda is responsible for the elimination of flatus & faeces. Acharya Sushruta explains it as Mamsa Marma, while Vagbhata mentions it as Dhamani Marma. This review aims to analyse the classical descriptions of Guda Marma and correlate them with modern anatomy to understand its structural basis and clinical significance. Classical literature on Guda, Guda Marma, and Guda Valis was reviewed and compared with the anatomy of the anorectal region. The close association of muscular, vascular, and neural structures explains the grave prognosis associated with injury to Guda Marma and supports its designation as a Sadyapranahara Marma. Correlating the classical descriptions with modern anatomy enhances the understanding of Guda Marma and highlights its relevance in anorectal trauma and surgical practice.

Keywords: Marma, Guda Marma, Dhamani Marma, Rectum, Anal canal, Anus.

INTRODUCTION

Marma is a unique concept described in Ayurveda that denotes vital anatomical locations where injury can result in severe pain, disability or death. The knowledge of Marma holds immense importance in Marma Sharira and forms an integral part of Shalyatantra. Acharya Sushruta emphasized its clinical significance by stating that knowledge of Marma constitutes *Ardha Chikitsa* (half of the knowledge of surgery), as inadvertent injury to these vital structures during trauma or surgical procedures may produce grave consequences.¹

A total of 107 Marmas have been described in the classical Ayurvedic texts and are classified based on their structural predominance, anatomical location, dimensions, and prognostic effects following injury.² Among these, Guda Marma is situated in the Udara (trunk) region and is considered a Sadyapranahara Marma, indicating that injury to this Marma may result in immediate or rapid fatality.³

A difference of opinion exists among the classical Ayurvedic texts regarding the structural classification of Guda Marma. Acharya Sushruta classified it as a Mamsa Marma, whereas Acharya Vagbhata described it as a Dhamani Marma.⁴ This difference in classification highlights the need to re-examine Guda Marma through modern anatomical correlation.

Therefore, the present review aims to analyze the classical descriptions of Guda Marma and correlate them with contemporary anatomical knowledge to better understand its structural basis and clinical significance.

CLASSICAL DESCRIPTION OF GUDA MARMA

Several synonyms of Guda have been described in the classical texts, including Apana, Payu, Gudavartma, and Guhya, each denoting its location or function.⁵ Acharya Charaka included Guda among the 15 Koshtangas, emphasizing its importance as a component of the abdominal viscera. According to Acharya Chakrapani's commentary, Guda is functionally divided into two regions: Uttaraguda, which serves as the site for the retention of Mala (faeces), and Adharaguda, which is responsible for the evacuation of Mala during the act of defecation.⁶

Acharya Sushruta described Guda as the terminal part of the Sthulantra (large intestine), measuring approximately 4½ Angulas in length. It is characterized by three spiral transverse folds (Valis) known as Pravahani, Visarjani, and Samvarani, each separated by about 1½ Angulas. These folds encircle the lumen with a circumference of nearly 4 Angulas and are arranged in a conch-like spiral (Shankhavarta), resembling the palate of an elephant (Gaja Talu). The Gudoshta, corresponding to the external anal margin, is described as being situated approximately 1½ Yava above the hairline.⁷ The three Guda Valis perform distinct physiological functions and have been correlated with corresponding structures of the modern anorectal region, as shown in **Table 1**.

Sr no.	Guda Valis	Functions	Situation	Probable Modern correlation
1	Pravahani	Facilitates the passage of faeces	Proximal	Houston's Valve
2	Visarjani	Expels the faeces	Middle	Internal Sphincter
3	Samvarni	Maintains continence by retaining faeces	Distal	External Sphincter

Table 1: Correlation of Guda Valis with Modern Anatomy

According to the commentary of Dr. Ghanekar on Sushruta Samhita, the term Guda primarily corresponds to the anal canal and anus rather than the rectum, as its principal function is the elimination of faeces and flatus rather than their storage.⁸ This interpretation provides a useful basis for correlating the classical description of Guda with the modern anatomy of the anal canal.

Guda Marma

Guda Marma is situated at the terminal part of the Sthulantra (large intestine) and serves as the passage for the elimination of Vata (flatus) and Mala (faeces). Among the 107 Marmas, it is one of the 19 Sadyapranahara Marmas, indicating that injury to this vital structure may result in fatal consequences. It is located in the Udara Pradesh and has been classified as a Mamsa Marma by Acharya Sushruta, whereas Acharya Vagbhata described it as a Dhamani Marma. Owing to its vital nature and the grave prognosis associated with its injury, careful preservation of Guda Marma is essential during anorectal surgical procedures.

Features	Sushruta	Ashtanga Hridaya	Ashtanga Samgraha
Location	Udara(trunk)	Udara(trunk)	Udara
Number	1	1	1
Measurement	Mushtipramana (4 Angula)	Panitala (4 Angula)	Panitala (4 Angula)
Predominant structures	Mamsa Marma	Dhamani Marma	Mamsa Marma
Prognosis of Trauma	Sadyapranahar Marma	Sadyapranahar Marma	Sadyapranahar Marma

Table2: Features of Guda Marma

Modern Anatomical Correlation of Guda Marma

According to the classical texts, Guda Marma measures approximately 4 Angulas, which corresponds to nearly 8–9 cm. In contrast, the anal canal measures approximately 3–4 cm in length.⁹ Since the classical dimensions of Guda Marma exceed the length of the anal canal, it is unlikely that the Marma corresponds to the anal canal alone. Therefore, Guda Marma may be anatomically correlated with the entire anal canal along with the terminal part of the rectum, collectively forming the anorectal region.

The rectum is the terminal part of the large intestine, extending from the rectosigmoid junction at the level of the third sacral vertebra (S3) to the anorectal junction, where it continues as the anal canal. It measures approximately 12–15 cm in length and primarily functions as a temporary reservoir for faeces before defecation. Unlike the anal canal, the rectum lacks specialized sphincteric mechanisms and is chiefly concerned with the storage and propulsion of faecal contents.¹⁰

Considering the classical dimensions of Guda Marma and the functional description provided in the Ayurvedic texts, the terminal anorectal segment of the rectum, together with the entire anal canal, may represent the probable modern anatomical correlate of Guda Marma. This correlation accommodates both the storage function described by Acharya Chakrapani for Uttaraguda and the expulsive function of Adharaguda, thereby integrating the classical description with contemporary anatomical knowledge.

The anal canal forms the terminal segment of the gastrointestinal tract and extends from the anorectal junction to the anal verge, measuring approximately 3.8–4 cm in length. It is divided by the pectinate line into upper and lower parts, which differ in their embryological origin, epithelial lining, arterial supply, venous drainage, lymphatic drainage, and nerve supply. These anatomical differences account for the distinct clinical presentation and management of various anorectal disorders.

The wall of the anal canal comprises an internal anal sphincter, formed by a continuation of the circular smooth muscle layer of the rectum, and an external anal sphincter, composed of voluntary skeletal muscle. Together with the puborectalis muscle, these structures constitute the anal sphincter complex, which plays a crucial role in maintaining continence and regulating defecation. Injury to the sphincter complex may result in varying degrees of faecal incontinence.

The arterial supply of the anal canal is derived from the superior rectal artery above the pectinate line and from the middle and inferior rectal arteries below it. Venous drainage occurs through the corresponding rectal veins into both the portal and systemic venous systems, forming an important portosystemic anastomosis. The upper part of the anal canal receives autonomic innervation, whereas the lower part is supplied by the inferior rectal nerve, a branch of the pudendal nerve, making it highly sensitive to pain, temperature, and touch.

Clinical Significance of Anorectal region

Owing to its complex musculovascular and neurovascular anatomy, injury to the anorectal region may result in sphincter disruption, haemorrhage, faecal incontinence, infection, pelvic sepsis, and, in severe cases, life-threatening complications. Although direct injury to the anal canal is relatively uncommon because of its protected anatomical location, penetrating trauma, foreign bodies, severe pelvic injuries, and anorectal surgical procedures may damage this region. Prompt diagnosis and appropriate management are essential to reduce morbidity and mortality.¹¹

Discussion

Marma are described in Ayurveda as vital anatomical sites where injury produces severe functional impairment or fatal consequences. Among the 107 Marmas, Guda Marma occupies a unique position because of its indispensable role in maintaining continence and facilitating the elimination of faeces and flatus. Although all classical texts unanimously classify Guda Marma as a Sadyapranahara Marma, differences exist regarding its predominant structural component.

Acharya Sushruta classified Guda Marma as a Mamsa Marma, whereas Acharya Vagbhata described it as a Dhamani Marma. This difference may be explained by considering the complex anatomy of the anorectal region. The anal canal is surrounded by the internal and external anal sphincters together with the puborectalis muscle, which collectively form the anal sphincter complex. These muscular structures are essential for maintaining continence and coordinating defecation. Damage to the sphincter complex can result in faecal incontinence and marked impairment of anorectal function. The predominance of these muscular structures provides a reasonable anatomical basis for Sushruta's classification of Guda Marma as a Mamsa Marma.

Conversely, the anorectal region also possesses an abundant arterial supply through the superior, middle, and inferior rectal arteries, with extensive venous communications forming a portosystemic anastomosis. Severe anorectal trauma may therefore be associated with significant haemorrhage, vascular compromise, and, in complex pelvic injuries, life-threatening blood loss. The rich vascularity of this region may explain why Acharya Vagbhata classified Guda Marma as a Dhamani Marma. Rather than representing contradictory

views, these classifications may reflect the predominance of different anatomical structures considered by the respective Acharyas.

The classical measurement of Guda Marma is described as 4 Angulas, corresponding approximately to 8–9 cm. Since the anal canal measures only 3–4 cm, the classical dimensions cannot be completely accommodated within the anal canal alone. Therefore, the present review proposes that Guda Marma may be anatomically correlated with the terminal part of the rectum together with the entire anal canal.

The three Guda Valis described by Acharya Sushruta further support this anatomical correlation. The Pravahani Vali, concerned with the passage of faeces, may be correlated with the transverse rectal folds (Houston's valves), which contribute to the controlled movement of faecal material. The Visarjani Vali, responsible for expulsion, may correspond to the internal anal sphincter, while the Samvarani Vali, which retains faeces, may be correlated with the external anal sphincter. Although these correlations are interpretative, they provide a functional bridge between the classical descriptions and modern anorectal anatomy.

The designation of Guda Marma as a Sadyapranahara Marma may also be explained from a contemporary anatomical perspective. Although isolated anal canal injuries are relatively uncommon because of the protected location of the anorectal region, penetrating trauma, severe pelvic injuries, or delayed management of anorectal infections may lead to extensive vascular injury, sphincter disruption, pelvic sepsis, and systemic complications. In severe cases, these conditions can become life-threatening, supporting the classical description of Guda Marma as a vital anatomical region.

Overall, the present review demonstrates that the classical descriptions of Guda Marma closely correspond with the anatomy and functional importance of the anorectal region. The coexistence of substantial muscular and vascular elements within this region provides a plausible explanation for the differing structural classifications proposed by Sushruta and Vagbhata. Correlating the Ayurvedic concept of Guda Marma with modern anatomy may contribute to a better understanding of its clinical relevance and surgical significance.

Conclusion

Guda Marma is one of the nineteen Sadyapranahara Marmas described in the classical Ayurvedic texts and represents a vital region of the anorectal tract. Although Acharya Sushruta classified it as a Mamsa Marma and Acharya Vagbhata as a Dhamani Marma, the present review suggests that these classifications emphasize different predominant anatomical components of the same region. Based on the classical dimensions of Guda Marma, its physiological functions, and the descriptions of Uttaraguda, Adharaguda, and the Guda Valis, the terminal part of the rectum together with the entire anal canal may be considered the most appropriate modern anatomical correlate of Guda Marma. The sphincter complex accounts for the muscular predominance described by Sushruta, whereas the rich arterial network supports Vagbhata's classification as a Dhamani Marma. Furthermore, the close relationship of the muscular, vascular, and neural structures within the anorectal region explains the grave prognosis associated with injury to Guda Marma and supports its designation as a Sadyapranahara Marma. Thus, integrating the classical Ayurvedic descriptions with contemporary anatomical knowledge provides a better understanding of the structural basis and clinical importance of Guda Marma, while also highlighting its relevance in modern anorectal surgery and trauma. Further cadaveric and clinical studies are warranted to validate the proposed anatomical correlation.

REFERENCE

1. Sushruta. *Sushruta Samhita*. Edited by Yadavji Trikamji Acharya. Varanasi: Chaukhambha Sanskrit Sansthan; 2019.
2. Vagbhata. *Ashtanga Sangraha*. Srikantha Murthy KR, editor. Vol. 2, Sharira Sthana. 9th ed. Varanasi: Chaukhambha Orientalia; 2012.
3. Sushruta. *Sushruta Samhita*. Edited by Yadavji Trikamji Acharya. Varanasi: Chaukhambha Sanskrit Sansthan; 2019.
4. Vagbhata. *Ashtanga Hridayam*. Srikantha Murthy KR, translator. Vol. 1. Reprint ed. Varanasi: Chaukhambha Krishnadas Academy; 2018.
5. Amarasimha. *Amarakosha*. Shastri H, editor. Reprint ed. Varanasi: Chaukhambha Krishnadas Academy; 2012.
6. Agnivesha. *Charaka Samhita of Agnivesha*, revised by Charaka and Dridhabala, with Ayurveda Dipika commentary of Chakrapanidatta. Acharya YT, editor. Varanasi: Chaukhambha Surbharati Prakashan; 2022.

7. Sushruta. *Sushruta Samhita of Sushruta* with Nibandhasangraha commentary of Dalhanacharya. Acharya YT, editor. Reprint ed. Varanasi: Chaukhambha Surbharati Prakashan; 2022.
8. Sushruta. *Sushruta Samhita: Nidana Sthana*. Ghanekar BG, commentator. New Delhi: Meherchand Lachhmandas Publications; 2019.
9. Standring S, editor. *Gray's Anatomy: The Anatomical Basis of Clinical Practice*. 42nd ed. London: Elsevier; 2020.
10. Chaurasia BD. *Human Anatomy*. Vol. 2. 9th ed. New Delhi: CBS Publishers & Distributors Pvt Ltd; 2023.
11. Mishra JN. *Marma and Its Management*. 1st ed. Varanasi: Chaukhambha Orientalia; 2013.

