



APPLIED ANATOMY OF GUDA (RECTUM AND ANUS) AS PER AYURVEDA

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ABSTRACT

AIM: To evaluate the importance of applied anatomy of Guda as described in Charaka, Sushruta and Vagbhata
Methods: The three major books of Ayurveda namely Charaka, Sushruta and Vagbhata were included as reference books.

DISCUSSION: Guda has been enumerated as one among 15 viscera of the abdominal cavity. It is a vital point of the body, the injury to which leads to fatal outcome. It is a principal organ of excretion of flatus and faeces. It contains three obliquely placed muscular structures known as sphincters which help in the process of defecation. In that way, Sushruta has given a scientific view about the act of defecation. Guda or ano-rectum has a rich blood supply by dhamani (artery) and sira (Veins). The Guda is developed from the maternal genetic component of the foetus. The Arsha in a patient may be carried in the generations. Sushruta has also given the dimensions of Guda, which has been given utmost importance in understanding anatomy and various diseases associated with it.

CONCLUSION: In this regard, it is concluded that knowledge of Guda as mentioned in Sushruta Samhita and Ashtanga Hridaya is a detailed one and it is very useful in understanding the diseases pathogenesis as well as treatment.

KEYWORDS : Guda, Anus, Rectum, Anatomy, Gudavali, Gudamarma

INTRODUCTION:

In the recent times, we the specialists of surgical discipline of Ayurveda gained much limelight in the management of disorders of rectum and anus. The innovations in the field of proctology have enabled us to treat the suffering humanity with ease.

GENERAL CONSIDERATIONS:

It is one among the fifteen *koshthagangas* (abdominal viscera) as mentioned by *Acharya Charaka*.¹ It has two parts - *Uttara guda* (proximal part) and *adhara guda* (distal or terminal part). *Chakrapani*, the commentator of *Charaka*, explained, '*Uttara guda* is the seat of faecal material collection and *Adharguda* is the evacuator,' It suggests that the extent of *uttara guda* lies up to pelvic colon and *adharguda* is rectum and anus, because as soon as faeces enters in to rectum, there is desire to defecate.

Guda is also one among *Pranayatana*² and it is a *marma* of *sadyopranahara* (resulting in death) variety.³ *Sushruta* has described that *Guda* is a terminal portion of *Sthulantra* (Large intestine) in vicinity to *basti* (urinary bladder). Its physiological action is to excrete the faeces and flatus.⁴ *Sushruta* has categorized it as *Bahyasrotasa* (external opening channel).⁵

METHODS AND DISCUSSIONS:**EMBRYOLOGICAL CONCEPT OF GUDA AS PER AYURVEDA:**

Regarding the embryology in *Ayurveda*, it is said that parts of body are formed from the predominance of maternal, paternal and other genetic aspects. *Guda* is *Matrija* in origin; means, it is developed in pregnancy with best part of maternal genes.⁶ Its physical composition occurs in intrauterine life from the best part of *Rakta* and *Kapha* being digested by *Pitta* and penetrated by *Vayu*.⁷ The above description suggests the complex anatomy of anus and rectum containing specific formation of muscles.

RELATIONS OF GUDA:

Sushruta has said that *Guda* is situated in *Gudasthivivara* (pelvic cavity) in vicinity to *bastishira* (bladder neck), *paurusha* (prostate).⁸ *Sushruta* directed to put a finger in to anus during the operation of vesical calculus for fixation in perineum thus quite justified that *Guda* is an organ which is terminal part of large intestine situated in pelvic cavity anterior to *gudasthi* (sacrum) and posterior to *basti* (urinary bladder)

MEASUREMENTS OF GUDA:

As per the *Sushruta* and *Vagbhata*, the total length of *Guda* is four and a half angula.⁹ *Vagbhata* also described the measurement of

Guda as *atmapanitala* (palm of hand).¹⁰ *Dalhana*, the commentator of *Sushruta Samhita* considered one angula as maximum width of thumb. This is practically equal to two centimetres. Therefore, the total length of *Guda* is about 9 cm. As per the anatomy, the length of anus is 3 to 4 cm and total length of anorectal canal from recto-sigmoid junction to anal verge is 16.5 cm. Keeping in view the above points, it is concluded that *Guda* is anal canal with distal 5 to 6 cm of rectum that means up to middle Houston valve.

INTERNAL STRUCTURE OF GUDA:

Sushruta and *Vagbhata* have described the presence of three valis (folds) inside *Guda* from proximal to distal. These are - *Pravahini*, *Visarjani* and *Samvarni*. These are situated one over the other inside *Guda* at a distance of one and a half angula from each other. All of them are obliquely projectile in one angula, *Shankhavartanibha* (spiral like conch), and resembling colour of *Gajatalu* (palate of elephant) as reddish black. *Gudaustha* is situated at a distance of one and a half yava from *romanta* (hairy margin). The first vali is at a distance of one angula from anal verge.¹¹

Dalhana, while dealing with the above context clarified that three yavas are equal to one angula length and specified that *Gudaustha* distance is about half angula (one and a half yava) from *romanta*. Now the entire description of valis can be interpreted in the light of modern anatomy. Some authors have enumerated these valis are sphincters.¹² *Gananath Sen* assumed the distal two Houston valves as *Pravahini* and *Visarjani*, the area of external and internal anal sphincters collectively as *samvarni*. *Sharma et al* in 1968 described *Pravahini*, *Visarjani* and *Samvarni* as lower Houston valve, column of *Morgagni* and dentate line respectively.¹³

Let us see the exact measurements of the rectum and anal canal in the view of Ayurvedic concepts. As per *Sushruta*, *Gudaustha* is situated half angula from *romanta* and distal most vali *Samvarni* is at one angula distance from *Gudaustha*. Therefore, the position of *Samvarni* is almost taken at the level of dentate line, as an angula is almost equal to 2cm. *Visarjani* is situated one and a half angula (3 cm) proximal to *Samvarni*; therefore, it may be at the level of anorectal ring and inferior Houston valve. *Pravahini* is again at a distance of one and a half angula from *Visarjani* and it may be considered at the level of middle Houston valve.

MUSCLES OF GUDA:

Sushruta has described the presence of three muscles in the *Guda* region.¹⁴ He categorized it as a *mamsa* predominating *marma*. He however not specified the names and location of these muscles. The muscles of anus and rectum are longitudinal and circular muscles.

GUDA AS A MARMA:

Sushruta has described Guda is one of sadyopranahara marma (results instantaneous death) and predominantly a mamsa marma.¹⁵ Vagbhata has mentioned Guda as Dhamani marma.¹⁶ In fact muscular components in the form of sphincters play an important role in the act of evacuation as well as continence. The blood supply is unique and rich; therefore, we can say that Guda is vital organ and injury to this may lead to fatal outcome.

BLOOD SUPPLY OF GUDA:

Guda is the root of purishavaha srotas.¹⁷ It has an external opening and is one among nine bahirmukh srotas. It has dhamani (arteries) and sira (veins) as well. There are eight siras present in the middle part of sroni (pelvis) which supply to Guda and Medhra.¹⁸ There are two dhamanies supplying Guda in downward direction.¹⁹ The blood supply is very specific as there is porto-systemic anastomosis in anal canal. Owing to this piles may occur in cases of portal hypertension.

SUMMARY AND CONCLUSION:

By the above discussion, it is concluded that anatomy of anus and rectum has been explained in a very scientific way in ancient Ayurvedic classics such as Charaka, Sushruta and Vagbhata. It gives us a way to understand the pathology of the disease and also throws the light regarding the surgical and para-surgical interventions in the region of anal canal. Since, it is a marma (vital point); therefore, surgical or para-surgical interventions should be carried out with utmost care. If the precautions are not taken, then fatal outcome may occur. It has been seen after performing the procedures on anal canal that bleeding from a very small area may become fatal to the patients. After the anaesthesia, it becomes very difficult to identify the areas from where exactly bleeding occurs.

The views of our acharyas are very genuine regarding the understanding of the genesis of pile mass in the generations. It may be a defect in the genetic components of that region. It is noticed that piles may occur in the members of same family and it shows the genetic angle to that disease.

The treatment of the diseases should be carried out after proper understanding of the applied aspect of the anatomy of the Guda. If necessary instructions are followed, the complications may be avoided during and after the procedure. There is further need to understand the concepts of Ayurveda in relation to modern anatomy of Guda, so that new treatment methodologies could be evolved.

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