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A comparative study of *Guda Sharira* with contemporary knowledge of Anatomy

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ABSTRACT

The science of life aims all alleviations of diseases as well as maintenance and promotion of good health. But in today's era due to sedentary life style and less physical activities, frequency of several diseases and disorder has increased. According to literature, the incidence of anorectal diseases in the general population is 5-15%.[1] The incidence of anorectal diseases during pregnancy may increase upto 4½.[2] Here *Guda* means the organs which excrete the *Apana Vayu* and *Mala.*[3] So, *Guda* can be used to indicate end part of digestive system. Almost all the *Acharyas* have use this term to refer to an organ, which perform function of defecation. *Guda* is a continuation of large intestine and embryologically derived from *Matrujabhasa.*[4] *Acharya Charak* describes *Guda* as one of *Khoshtangas*[5] and further elebroate that within the pelvic region the *Guda* has two part *Uttara Guda* and *Adhara Guda.*[6] *Guda* is identified as *Mool* of *Pureeshavaha Srotas*[7] in Ayurvedic text. It is also categorized as *Bahirmukha Strotas*[8] and one of the *Karmendriya*[9] (Organ of action). *Guda* is one among the *Prananayatan.*[10] It has also been included in *Sadyopranahara*[11] and *Mansa Marma Guda* is seat of *Muladhar Chakra* on which all the *Chakra* depends. The aim of this study is to reconstruct the concept of *Guda* in this current era to visualise the structure, location, reginal anatomy of ano rectal region. The importance of this study as *Guda* is vital organ of human body having a rich blood supply which correct knowledge and applied aspect concerning anorectal injuries and disorder.

Key words: *Guda Sharira, Uttar Guda, Adho Guda, Ano Rectal Region.*

INTRODUCTION

To show the importance of the study of *Sharir Rachana, Acharya Shusrut* has Rightly quoted that no one can become a good physician without having proper theoretical and practical knowledge of anatomy of human body Ayurveda is a holistic science on which the current medical science stands. In our classical text various concepts mentioned by different *Acharyas* but to prove those concepts several attempts have done. If we could interpret the exact meaning of our classical text mentioned by *Acharya* it would by much help to expand Ayurvedic view world wild and might help to achieve *Ayurveda* aim towards providing better treatment to diseased person. As per *Guda Sharir, Acharya Charka* describe *Guda* as *Kosthang* among 15 and having two-part *Uttaraguda* & *Addhoguda*. Also, *Charka* mentions as one of the *Dasha Pranayatan*. *Acharya Sushruta* and *Vagbhatt* explain *Guda* as *Marma*.

It is very essential to have knowledge of anatomical relations and structures of *Guda*, because without this, surgical treatment cannot be done properly. The anatomical description of *Guda* is not clearly available in Ayurvedic literature. But we can get an idea about anatomical concept of *Guda* by taking into consideration of scattered references in different texts.

AIM AND OBJECTIVES

1. To Study *Guda Sharir* and its relation to modern anatomy.

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2. To interpret the exact location of *Guda* mention in Ayurvedic text which will provide better treatment to diseased person.
3. Detail study of *Guda Sharir* & its comparison with anorectal region.

Materials and Methods

Source of Data

Literary Source

Literary aspect of the study will be collected from Classical Ayurvedic Texts, Contemporary Medical Science, Medical journals and Internet.

Review of Literature

Embryological origin of *Guda* in *Ayurveda*

Embryologically *Guda* is originated from *Matruja Bhava* of *Garbha*.[12] The *Antras*, *Guda* and *Vasti* of the fetus are for made from *Rakta* and *Kapha*, after being digested by *Pitta* and *Vayu*.[13]

Location of *Guda*

Charaka has classified it among one of the 15th *Koshtangas*. He divided it into two parts i.e., *Uttara Guda* and *Adhara Guda*. *Chakrapani* says that *Uttara Guda* is an organ in which *Pureesha* (feces) is collected while *Adhara Guda* is meant for excretion of feces.[14] According to *Sushruta*, it is attached to *Sthulantra* (large intestine) and is one of the organs that come in relation with *Vasti*.[15]

Relations

While describing operation of *Ashmari*, *Sushruta* has instructed that first surgeon should introduce his finger in the *Guda* and fix the calculus to make prominence in the perianal region. It indicates that *Guda* is located closely posterior to the *Vasti*.[16]

Extent of *Guda*

Sushruta and *Vagbhata* have mentioned about the length of *Guda* as 41/2.[17] *Angulas* The measurement of one *Angula* is approximately 2cm, on the basis of this the total length of the *Guda* is 9cm. It is well known that maximum length of the anal canal is 3cm. Thus, the extent of *Guda* includes that anal canal plus the lower 6cm of rectum, which gives roughly as Inferior Houston's valve. The total length of ano-rectal canal from the anal margin to the recto-sigmoid junction is about 16.5cm. Out of this 3cm is the length of anal canal, upper 71 cm is rectum and 41/2 *Angulas* measurement of *Guda* exceeds the anal canal and fall short of recto-sigmoid Junction. It infers that *Guda* includes anal canal and apart of rectum.

Internal structure of *Guda*

Sushruta has described that the interior of the *Guda* (Anorectal canal) contains Three *Valis*. They are *Pravahini*, *Visarjini* and *Samvarani.* These are situated one above the other at an interval of *Angala.* They are arranged in spiral form (*Shankasarta Nibha*) and resemble the color of palate of an elephant (*Gaja Talu*).[18]

Vaghbata has clarified the positions of these *Valis.* He named proximal one is *Pravahini*, the middle one is *Visarjini*, and distal one in *Samvarani*.[19]

Table 1: *Gudvali*

1.	*Pravahini*	Proximal	Middle Houston's Valve
2.	*Visarjini*	Middle	Inferior Houston's Valve
3.	*Samvarani*	Distal	Dentate line

Guda as *Marma, Srotas* and *Pranayatana*

Sushruta has described the *Guda* as a *Mamsa Marma*, which is attached to *Sthulantra* (large intestine) and through which *Vata* and *Purisha* is excreted out. Any injury occurring to this organ results in immediate death. So, it is considered as *Sadyah Pranahara Marma*.[20]

He also considered the *Guda* as a *Bahya Srotas*, means having opening to the exterior. *Charaka* and *Vagbhata* considered as one among the *Dasapranayatana*.[21]

Sira and *Dhamani* of *Guda*

Sira (veins) represents carrier channels of *Vata*, *Pitta*, *Kapha*, blood, lymph, urine, feces, semen and menstrual blood. *Sushruta* has stated that out of 34 *Sira*, which are found in the *Koshta* (abdominal cavity), & supply to the *Guda*, *Medra* (penis) and the *Shroni*

(pelvis).[22] The *Dhamanis* (arteries) taking a downward course carry *Apanavata*, *Muthra* (urine), *Purisha* (feces), *Shukra* (semen) and *Artava* (menstrual blood) to the respective organs such as *Pakwashaya* (intestines) *Kati* (waist), *Guda*, *Vasti* and *Medra*. All these organs situated below the level of *Nabhi* (umbilicus). The two *Dhamanis* attached to the *Sthulantra* perform excretion of the *Purisha* (feces).

Discussion

Modern Anatomy

Anatomy of the Rectum and Anal canal. The terminal part of the large intestine is the rectum and anal canal. The useful components of the food are absorbed and the end waste material is stored in this part of the gut, that to be expelled through the anus, which is the external opening of the anal canal present in the anal triangle of the perineum. Anal canal is heavily guarded by the sphincters.

Rectum

The rectum is the distal part of the large intestine. Distension of the rectum causes the desire to defecate. Rectum is curved in an antero-posterior direction and also from side to side. The three cardinal features of the large intestine i.e., sacculations, appendices epiploicae and Taenia ecoli are absent in the rectum.

Situation - The rectum is situated in the posterior aspect of the lesser pelvis in front of the lower three pieces of the sacrum and coccyx.

Extent - The rectum begins as a continuation of the sigmoid colon at the level of the third sacral vertebrae. The recto-sigmoid junction is indicated by the lowered the sigmoid colon. The rectum ends by becoming continuous with the anal canal at the anorectal junction. The junction lies 2-3cm in front and little below the tip of the coccyx. The relation of this part in males, the junction corresponds to the apex of prostrate and in females is at the level of lower part of the vagina.

Dimensions - The rectum is 12cm long. In the upper part it has the same diameter of 4cm as that of sigmoid colon, but in the lower part it is dilated to form the rectal ampulla.

Course and Direction - In its course, the rectum runs first downwards and backwards, then downwards and forwards. The beginning and end of the rectum lies in the median plane, but it shows 2 types of curvatures in its course.

Two antero-posterior curve - the sacral flexure of the rectum follows the concavity of the sacrum and coccyx. The perineal flexure of the rectum is the backward bend at the anorectal junction.

Three lateral curves - the upper lateral curve of rectum is convex to the right. The middle lateral curve is convex to the left and is most prominent. The lower lateral curve is convex to the right.

Relations:

Peritoneal relations

1) The upper 1/3 of the rectum is covered with peritoneum anteriorly and the sides.

2) Middle 1/3 of the rectum is covered only anteriorly

3) Lower 1/3rd, which is dilated to form the ampulla lies below the lower 1/3.

Anal Canal:

It is the large segment of digestive tube. The alimentary canal opens caudally on the body surface as anus. It is about 3.8 cm length and 1.25 to 1.9cm in diameter, from the termination of rectum to the anus situated in the perineum between the two gluteal folds. The functional length of anal canal measured by palpation averages 4.2cm (range 3-5cm) and cannot be related to the anatomic length of the anal canal from the dentate line to the anal verge which has an average length of 1-2cm (rangel-3.8cm).

Anus:

It is the external opening of anal canal, situated about 4cm below and in front of tip of the coccyx and in the natal cleft. The skin is much pigmented and presents radiating folds and hairs are present in the male, large apocrine glands are found in the skin surrounding the anal orifice.

Anal canal musculature

The internal sphincter is a thickened continuation of the circular muscle coat of the rectum. This involuntary

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muscle commences where the rectum passes through the pelvic diaphragm, and ends at the anal orifice, where its lower border can be felt. The internal anal sphincter is 2.5cms long and 2-5mm thick. When exposed during life, it is pearly white in colour, and its individual transversely placed fibers can be seen clearly. Spasm and contracture of this muscle play a major part in fissure and other physiological aspect of the anal canal conditions.

The longitudinal muscle is a continuation of the longitudinal muscle coat of the rectum inter mingled with the fibers the puborectalis. Its fibres fan out through the lowest part of the external sphincter, to be inserted into the true anal and perineal skin. The longitudinal muscle fibers that are attached to the epithelium provide pathways for the spread of perianal infections, and mark out tight compartments that are responsible for the intense pressure and pain that accompany many localized perianal lesions. Beneath the anal skin lie the scanty fibers of the corrugator's cutis ani muscle.

The external sphincter, formerly subdivided into a subcutaneous, superficial and deep portion is now considered to be one muscle. Some of its fibers are attached posteriorly to the coccyx, while anteriorly they are inserted into the male perineal plain in the male, whereas in the female they fuse with the sphincter vagina in life the external sphincter is pink in colour," and homogenous unlike the pale internal sphincter muscle, which is involuntary. Their external sphincter is composed of voluntary (somatic) muscle between the internal (involuntary) sphincter and the external (voluntary) sphincter.

Ayurved Sharir* of *Guda Valis	**Modern anatomy**
Pravahini	Largest Houston's valve
Visarjani	Internal anal sphincter
Samvarini	External anal sphincter
Uttarguda	Seat for faecal collection
Adharguda	Seat for evacuation of the stools
Guda	Anal canal with some extent up to largest transverse fold

Conclusion

On the basis of above study, we can correlate *Guda* with the rectum part of the large intestine. Three *Gudavalis* can correlate with the three transverse folds of the rectum. *Pravahini* can be considered as the largest Housten valve. *Visarjani* can be considered as the internal anal sphincter. *Samvarani* can be considered as the external anal sphincter. *Uttarguda* is the seat for faecal collection and *Adharguda* for evacuation of the stools.

References

1. Myams L, Philpot J. An epidemiological investigation of Haemorihods. An J. Proctol 1970; 21:177-193 (Pub Med.)
2. Avjar AF, Keslim HL. Haemorihods during pregnancy J. Obstet gynaccol 2010; 30:231-237 (Pub med)
3. Sushruta Samhita 5. Vol-1, commentaries Nihandhasamgraha by Dalhana, Nyayachandrika by Gayadas, translated by Dr. Keval Krishna Thhakaral, Chaukhambha Orientalia Varanasi, edited 2016, Sutra Sthan 21/6
4. Agnina Surveda ka commentary of Chakespeita de Lexmar Chun Karmy Verans Ellied 2014, Shari Shana 16.
5. Agnivesha. Charak. Samhita C., Vol. 2. Ayurveda Derpika commentary of Chakrapanidatta, edited by Dr. Laxmidhar Dwivedi, Chaukhambhu Krishnadas Academy. Varanasi Edited 2014, Shartr Sthana 7/30
6. Agnivesha. Charak. Samhita C., Vol. 2. Ayurveda Derpika commentary of Chakrapanidatta, edited by Dr. Laxmidhar Dwivedi, Chaukhambha Krishnadas Academy. Varanasi Edited 2014, Shartr Sthana 7/30
7. Agnivesha, Charak, Samhita C, Vol-2, Ayurveda Deepika commentary of Chakrapanidatta, edited by Dr. Laxmidhar Dwivedi, Chaukhambha Krishnadas Academy, Varanasi. Edited 2014, Vimana Sthana 5/B
8. Sushruta, Samhita, Vol-2, commentaries Nibandha samgraha by Dalhana, Nyayachandrika by Gayadas, translated by Dr. Keval Krishna Thhakaral, Chaukhambha Orientalia Varanasi, edited 2017, Sharir Sthan 9/12

9. Agnivesha, Charak, Samhita C, Vol-2, Ayurveda Deepika commentary of Chakrapanidatta, edited by Dr. Laxmidhar Dwivedi, Chaukhambha Krishnadas Academy. Varanasi. Edited 2014. Sharir Sthana 1/25.

10. Agnivesha, Charak, Samhita C. Vol-2. Ayurveda Deepika commentary of Chakrapanidatta, edited by Dr. Laxmidhar Dwivedi, Chaukhambha Krishnadas Academy, Varanasi, Edited 2014, Sharir Sthana 7/9.

11. Sushruta, Samhita S, Vol-2. commentaries Nibandhasampradu by Dalhana, Nyayachandrika by Gayadan, translated by Dr. Keval Krishna Thakaral Chaukhambha Orientalia Varanasi, edited 2017, Maru Shan 67,16.25.

12. Acharya Vagbhata: Ashtanga Hridaya By. Hari SadashivaShastri Paradakara. Chaukamba Samskrit Samsthan. Reprint 2012.P 956 (A.Hr.Sha 28th chapter 4th sloka)

13. Sushrutha Samhita: with nibandhasangraha, Acharya Yadavji Trikamji, Chaukamba Orientalia, Varanasi, Reprint2012.PP-824,PNo-357(Su Sha4:26.27th)

14. Charaka Samhita, Edited by Vaidya Jadavji Trikamji Acharya. Reprint 2009. Chaukamba Orientalia PP-738PNo-338.PNo-338(Cha Sha7:10)

15. Sushrutha Samhita with Nibandha sangraha, Acharya Yadavji Trikamji, Chaukamba Orientalia, Varanasi, Reprint2012.PP-824P.No-373(Su Sha6:25)

16. SushruthaSamhita with Nibandhasangraha, Acharya Yadavji Trikamji, Chaukamba Orientalia, Varanasi, Reprint2012. PP-824 P.No-440(Su. Chí7:30)

17. Sushrutha Samhita: with nibandha sangraha, Acharya Yadavji Trikamji, Chaukamba Orientalia, Varanasi, Reprint 2012.PP-824, P. No-279. (Su.Ni3:18.19)

18. Sushrutha Samhita, with nibandha sangraha, Acharya Yadavji Trikamji, Chaukamba Orientalia, Varanasi, Repriat 2012.PP-824P.No-436 (Su.Chi7:30)

19. Sushrutha Samhita with Nibandha Sangraha. Acharya Yadasji Trikamji. Chaukamba Orientalia, Varanasi, Reprint2012

20. Essentials of Kayachikitsa II. Volume -1. By Dr .Aruna. 1edition 2008,pp433.Pno.386

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