Comparison of Properties of Naveen, Puran and Suryatapi Guda (Jaggery) with Respect to Guru and Laghuguna - An Observational Study

Prashant R. Umate1, Meena Deogade2, Akshay Pargaonkar3, Jaya P. Umate4, Lata Kanyal5

1Assistant Professor, Department of Dravyaguna, DMAMCH&RC, Wanadongari, Nagpur, India; 2Professor & HOD, Department of Dravyaguna, MGACH&RC, Salod (H), Wardha, India; 3Assistant Professor, Department of Dravyaguna, MGACH&RC, Salod (H), Wardha, India; 4Assistant Professor, Department of Dravyaguna, MGACH&RC, Salod (H), Wardha, India; 5PG Scholar, Department of Sirogad & Prasalitanastra, Govt. Ayurveded College, Nanded, India; 6Tutor, Department of Biochemistry, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Wardha, India.

ABSTRACT

Ayurveda has explained the uses of aushadha (medicine) as well as ahardravya (food) in a precise manner; i.e. selection of drug, its form, duration of storage, etc. and advised using as per the condition. There are many examples of variation in properties as they become old which are mentioned in samitas. Accordingly, some drugs advised to collect and use fresh, for example, guduchi, vasa leaves whereas some are said to be stored for a specific period of time and then used when they become old (puran), for example; Ghruta, shali, etc. In Puran Dhanya there are changes observed called Gunantaradhan and become suitable for health, hence preferred to use. Likewise, guda is the very common sweeter used since ancient times in food as well as medicine. It is used for the preparation of various formulations (kalpa), fermentation (Sandhana), Anupana, binding agent and as par food concern it is rich in nutrition, minerals, energy. Ayurveda specifically advises using the old guda all where it is used but it becomes difficult to obtained old Guda every time it such a demanding era hence the solution is also stated to used Suryatapiguda state of old. The current study findings indicate old and Suryatapiguda is laghu (lighter) than that of the new guda.

Key Words: Naveen, Purana, Suryatapi, Laghu, Guru, Phanchabhuatiksamghatan

INTRODUCTION

Jaggery is the common sweeter in almost all kitchens. Ayurveda has given much more importance since the ancient period. Ancient literature explained multiple uses of guda in terms of food as well as medicinal products. Jaggery is a traditional unrefined non-centrifugal sugar mostly consumed in Asia, Africa as it has types of minerals and vitamins and it is considered as the healthiest sugar in the world since ancient times. It is available in various types out of these here we concern about jaggery which is prepared from sugar cane and solid jaggery. Jaggery is available in three forms; solid, liquid, and granular. Jaggery contains glucose and sucrose while white sugar contains glucose and fructose. Apart from these jaggery contains minerals like calcium, phosphorous, magnesium, potassium, iron, a trace of zinc, copper, and vitamins. In the current era very few people have the patience to get the desire or ideal quality of any drug material or it may unavailable as a result they used which is available in the market at that time. Acharyas may have this vision at that time hence mentioned about abhavpratinidhidravya. The reference in this study is taken from Bhaishajya Ratnavali. It is a rasa granth of a recent era that includes most of kalpas in Samhita. It mentioned in AbhavPratinidhi chapter at 4th number. It is specifically mentioned in Bhaishajya Ratnavaliabhavprakaran that when Puran Guda is not available then keep Naveen Guda in high (Tivra) sunlight for 4 Yama (12 hrs) before use, it serves properties like Puran Guda. The term “Suryatapi” is not mentioned in the literature but it is derived to denote the said description given in one word. Considering the need of today’s era, it may be the authenticate solution to prepare kalpa of Puran Guda. Our acharyas have given qualities of Naveen and purana Guda as guru, abhishyadi, ahikara, etc., and Laghu, anabhishyand, hitkara, respectively. These properties itself denote specific use either in medicine or food. The current study is based on simple panchabhutikshabdadi observations to established guru and laghuguna of guda.
Aim- comparing the properties of new, old, and Suryatapi guda with respect to laghu-guru guna.

Objectives
1. To explain the demarcation line of new, old, and Suryatapi guda.
2. To explain the properties of new, old, and Suryatapi guda with respect to laghu-guru guna.
3. To established the term “Suryatapi” for substitute of Puran guda mentioned in Bhaishajya Ratnavali.

Review of Literature

Guda
Guda is well known as one of the sweet products of sugar cane juice. Ayurveda has given a detailed description of Guda regarding its properties, forms, types, and properties. All most all Samhita, Nighantus have described about Guda in detail. It is used as aushadhi, anupana, ahara, and sandhanavavya.

Charaka has given guna of Guda i.e. Krimi-Majja-shyonit-Meda-Mam avardhak, in Sutrasthana, Annapanavi-dhiadhyaya. Final prepared shuddha Guda is alpadodhkar. Charaksamhita mentioned various kalpa in Chikitsasthana for chikitsa where Guda is one of the ingredients e.g. Guda Madya (in Udavart), Guda Sharbat (Panak) (in Talusosh, Madyajanya Trishna, Annap Trishna), Asava-Arishta (Abhayaristha, Dantyarishta, Phalarishta, etc.), content and binding agent (e.g. Shyamadi Vrti, Pinyaka Varti), anupana (Pippalyadi Ghrut), lepa (local application)-(Guda+Pippali+ ChitrakadilepaandGuda+Arkasht+Snuhikshee-Pralep in Arsha), after Panchakarma procedure (Gudayuktaadhugapana- after manshiladi Dhumpana and Prapoundrikadi Dhumpana), although Charaka did not mention about the use of puran guda but there are some kalpas given in chikitsasthana which gives the specific reference of Purana Guda (e.g. Dusparshadileha in vatakjas, Haritaki Leha, in Swasa, Kasa, Drakshadi Leha-kasa) particularly.

Sushruta has mentioned about Guda and its properties in sutrasthanaadhyaya 45, Dravdravya,vrdhyaninya, specifically given phyaapathya with ikshuvikara, Virudhhanna (1. Kakmachi & Guda, 2. Varahamamsa + Guda) (Su.Su.20/13), specifically advised to use puranguda (Su.Su.36/7). Guda is to be used in virechana in various conditions (Su.Su.44/7, 11). He mentioned kalpas for treating various disease and disease condition like vatraka, vrana, dadru, Udara, Gulma, Vridadi, and Kustha.

Vagbhat mentioned guda in Sutrasthana, dravdravya,vrdhyniya, shlok 48, 49 (AH.Su 5/48, 49). Naveen Guda is kapha-parakar and creates agnimandya while Puran Guda is Hridya, Pathya. Asthansangrahkara mentioned Guda in Sutrasthana, dravdravya,vrdhyniya, shlok 87 (As.Su 6/87). He explained the same properties as in Astangahridaya.

Sharangdhar has given more detailed information about matra (proportion) of Guda in Panchavidh Kasaykalpana (S.P.Kh.2/6). Guda is used in various diseased conditions as kalpa form or as anupana. There are several kalpa like Hemagarbhopottali rasa, Shital Jwāradi Rasa, Pathyadiwathwa, Shadanga Kwatha, and used in many formulations, especially in asava- arishkalpana and many more.

Yogaratnakara is well known among kaychikitsa treaties for its easy and systematic arrangement. It explained Guda in purvardha. Guda is Guru, Madhur, Ksharayukta, Ushna, Kapha-vatanashak, ahita in Pitta and Rakta vitiation. Yogaratnakara gives various kalpa where Guda is used as content, prakshep, anupana, etc.

Chakradutta is mainly focused on chikitsa part and mention various preparation for treating diseases. He has mentioned several kalpas of Guda useful in various diseases like Vataj Jwar, Pitta VatajJwara, Visam Jwara, Nakhasudhhi, Uru-stambha, Amvata, Pittaj Soola, Shoola, Parinam Soola, Vihandha, Udavarta, Gulma, Vatajgula, Rechan, Mutrakrichha, and in Ritu Haritaki.

Bhaishajya Ratnavali is a rasa granth of a recent era that includes most of kalpas in Samhita. It mentioned Abhav Pratinidhi chapter at forth number, includes a list of 74 abhavdrayyas. Bhaisajyaratnavali given abhavdravya of Naveen Gudaa mentioned in the introduction. Considering the need of today’s era, it may be the solution to prepare authenticates kalpa of Puran Guda.

B) Nighantu:

After the Samhita period, several Nighantu were composed of different scholars giving details of the drugs of vegetable origin. Nighantu are known for Synonyms, details about drug mentioned in Samhita are compiled here. Although Guda is very common among all treaties, all Nighantu has not mentioned it. Very few Nighantu mentioned about Guda in detail. The description about Guda in various Nighantu is summarising as follows;

He has mentioned properties of Puran Guda like Pittagha, Vatahar, ruchikara, Tridosaharaha, Jwāradi, Santapshanarti-prada, Vinmutrashodhak, Agníjanak, Snigdha, Pandu-Pramehantaka, Laghu, Shramahara, Pathya. Narhari also mentioned paryaya (Synonyms) to Guda asfkhshasara, Madhura, Rasapakaja, Shishupriya, Rasaj, Aruna, Sitadi denoting its significance.

Bhavnishra mentioned NaveenGuda properties as Vrushya, Guru, Snigdha, Vatanashak, Mutrasodhan, Na-ati-pittakara, Medakara, Kaphakara, Krimikara, Balakara, Swasakara and PuranGuda is Laghu, Pathya, Anbhishandi, Agníjanakaka, Pushikruta, Pittagha, Madhur, Vrushya, Vatagha, Raktaprasadaka. Bhavprakash has mentioned specific gana
with particular anupan like Guda with Ardraka- quick reduces the enhanced kapha, with Haritaki it acts on Pitta and when used with Sunthi it acts as Vatahara.\(^\text{15}\)

In Kaiyadeva Nighantu, *Guda* is placed in Aushadhi Varga and he has given guna of *Naveen Guda* as Madhur, Kshariya, Ushna, Kapha-Vatahar, Ahit in Rakta-Pitta dusti while JirnaGuda is Rasayana, Balavardhak, Shukravardhak. Kaiyadeva also gave that in the preparation of asava- arista *Prapuran Guda* should be used as it bears above mention properties. He also stated that *Guda* older than four years old is of no use for medicine and consumption as develop amlata, krimikaraguna, and become veeryahina.\(^\text{16}\)

Mahendra Bhoughika in Dhanvantari Nighantu *Guda* is mentioned in Karviradivarga and properties are Madhur, Guru, Kshariya, Ushna, Kapha-Vatahar, and Laghuguna having prominent Vayu and Agni bhutas.

Madanpala Nighantu–Kshariya, Guru, Swadu, Vatpittakar, agnikrita, Sara, Balya, Krimijnanam, Rakta-shodhan, Shleshmavardhan, are the properties of *Naveen Guda* while Hridya, laghu, Nabhishandi, Agnisandipana, Pustikara are the properties of *Purana Guda*.\(^\text{17}\)

DravyagunaSangraha-*Guda* is Vrushya, Guru, Snigdha, Sakti, Balya, Kapha-Vatahar, Agnihotra, while JirnaGuda is Rasayana, Balavardhak, Shukravardhak.

Mahan Nighantu also mentioned synonyms as Iksusara, Madhura, and Rasapakaja.\(^\text{18}\)

**Review of Laghu-Guru Guna**

*Guna* is defined as the characteristics by which people are attracted to a particular substance. *Guna* in the present study shall be considered as physical property since the constituent of *dravya* i.e. Rasa, Virya, Vipaka, and Prabhava mainly depends upon their *panchabhautikatvata* and following modern science, it will resemble the chemical property.\(^\text{22}\) Charaka defines *guna* as the characteristics which will remain in a *dravya* with an inherent relationship. *Guruvediguna* is termed as the *Saariraka Guna* as they denote common properties of *dhatu* and *dravya* (drug).\(^\text{23}\)

Guru guna act as vatahara and kaphavardhak, nourishes dhatus (Brimhana), increases malas, and possesses pharmacological actions like Balya-Tarpana, Triptijanak, Virechan, Virshya.\(^\text{24}\) Guru guna consists of Prithvi and Jalabhuta and Laghuguna having prominent Vayu and Agni bhutas.\(^\text{25}\) Laghuguna results in laghuta (lightness). It acts as kaphahara and vatavardhaka. It reduces mala, pathya, shighrapaki and Vaman, Lekhana, Pachana are the pharmacological actions exerted by Laghuguna.\(^\text{26}\)

**MATERIAL & METHOD**

**Part A**

Jaggery samples were collected from the farmers (manufacturer) making jaggery from the sugar cane cultivated by organic farming.

1. Three such Manufactures were selected viz; A. Yelakeli, Dist-Wardha, B. Tiwasa, Dist.-Yavatmal, C. Indurkha, Dist- Bhandara.

2. Two different samples of two different batches by each of them were collected in the month of January 2017 (i.e. Total 3X2 =6 samples were collected.)

3. All six samples were stored in an air-tight container.

**METHODS**

**Part B**

All these samples were further divided into three parts for study as follows;

1. First sample-Fresh sample (*Naveen Guda*); labelled as (N).

2. The second sample was placed in sunlight for 12 hours (i.e. 4 hrs. in a day from 12 pm to 4 pm for 3 days) (*SuryatapiGuda*); labelled as (S).

3. The third sample was kept in a closed container for a year (*Purana Guda*); labelled as (P).
**Part C**

*Naveen Guda* of all samples was studied for organoleptic characteristics (Rupa, Rasa, Gandha, Shabda, and Sparsha) first then *Suryatapi Guda* and after one year *Puran Guda* samples were studied.

**Observation and Results**

On studying all new samples of *guda*, it is observed that Rasa of each sample was Madhur, Gandha (Odour)- Pleas- ant (Madhugandhi), Shabda- Not specific (Soft), Sparsha- Smooth, Rupa (colour) brown.

Puran *Guda* is observed having Rasa- Madhur, Tikta, Gandha- Pleasant, Shabda- Bhangura (Easily breakable), Sparsha-Smooth, Rupa(color)- Brown (darker than new guda), Gandha- (Madhugandhi).

Suryatapi Guda- bears Rasa-Madhur, Tikta, Gandha- Pleasant, Shabda- Bhangura-Cut, Sparsha (Khara), Rupa (colour) Most dark brown.

**DISCUSSION**

Acharyas have stated the use of some drugs in specific forms as they might know some atypical properties will be originated in the drug which is more useful hence Shushruta also mentioned that madhu, ghrita, *Guda*, pippali, Vidanga are to be used *Puran*. We all know that grains advised to use when it became *laghu* (light). Here according to Kaiyadeva Naveen, Purana guda has taken and Suryatapi is taken as per mentioned Bhaishajyaratnavali. All opinions are about changes in *guna* after *samskara* like kala, atap, etc. which also applicable for guna. Charaka has mentioned panchbhutas tikatva of *guna*. Guru guna has a predominance of Prithvi and Jalamahabhuta; whereas Laghuguna has Vayu, Agni, and Akash mahabhuta. As per the general behavior of the material color of *guda* has changed, *Naveen Guda* was brown it turns to dark brown when became *Puran* (Kala samskara) whereas color of *SuryatapiGuda* was observed more dark brown than Naveen and Purana (atap Samskara). Odour of *Naveen, Puran*, and *Suryatapi Guda* were agreeable. *Naveen Guda* was soft in touch, *Puran Guda* has become hard, brittle, and easy to break whereas *Suryatapi Guda* was crystalline hard. Similarly, concerning changes in rasa (taste) from Naveen to *Puran Guda* there were very slight changes observed and not to be remarkable. But in the case of *Suryatapi Guda* it was very prominent acrid tending towards bitterness. The changes observed in taste from madhur to madhur-tikta, indicating the changes in panchabhauticsanghatana of *Guda* as prithi-jala to vayu-akash. The changes occurred due to Agni and Kala for Suryatapi and Purana Guda respectively. These are responsible for converting Guru to Laghuguna of Guda. Few of the related articles to ayurvedic medications are available.

**CONCLUSION**

It can be clearly said that Guru guna of Naveen guda is changed to laghu when it became Purana or make it Sury- atapi as alleged in Bhaishajyaratnavali.

Acknowledgement: authors acknowledge the immense help received from Datta Meghe Ayurvedic Medical Col- lege Hospital & Research Center, Wanadongri, Nagpur for conducting this study.

Conflict of interest: None
Umate et al.: Comparison of properties of naveen, puran and suryatapi guda (jaggery) with respect to guru and laghuguna-...

<table>
<thead>
<tr>
<th>Table 1: (Continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Rasa (Taste)</td>
</tr>
<tr>
<td>Gandha (Odour)</td>
</tr>
</tbody>
</table>

N=Naveen, P=Puran, S=Suryatapi; Shabda- Sf- Soft, Bh-Bhangur, Ct- Cut; Sparsha- S-Smoth, H- Hard, HCr -Hard and Crystaline, Cr.-Crystalline; Rupa- B- Brown, DB- Dark Brown, DB+- Most Dark Brown. Rasa-M-Madhur, MT-Madhur-Tikta, MT++-Madhur-Tiktatama; Gandha- P-Pleasant, CP- Pleasant Coffee/chocolate like

Plate 1: Stage of preparation of guda

Plate 2: Stages of preparation procedure of Guda

Plate 3: Naveen, Puran and Suryatapi Guda of all Samples

REFERENCES

5. Agnivesha krit, charak pratisansrit, Edited by Pandit Kashinath-Charak Samhita-Purvvardha,reprint yr 2008
12. Chakrapanidutta virachit, Chakradatta, Sastri Vaidya Ravidutta, , Chaukhamba Surabharati Prakashan, Varanasi 2012,
14. http://niimh.nic.in/ebooks/eNighantu/rajnishantu/mod=read&h=guDa, accessed on date 02/01/2017, time 10.10am.
17. http://niimh.nic.in/ebooks/eNighantu/dhanvantarinishantu/mod=read&h=guDa, accessed on 02/01/2017,time 10.20am.
18. http://niimh.nic.in/ebooks/eNighantu/madanpniinthantu/mod=read&h=guDa, accessed on 02/01/2017,time 11.50am.
20. http://niimh.nic.in/ebooks/eNighantu/madhavninighthantu/mod=read&h=guDa, accessed on 02/01/2017,time 11.00am.