

Jaggery (Guda): Ayurvedic Review and Its Health Benefits over Refined Sugar.

*Dr. Kavita, **Dr. J P Chaudhary, ***Dr. Jagdish Omkar, ****Dr. Om Prakash Sharma.

**PG Scholar, PG Department of DravyaGuna, Sri ganganagar College of Ayurvedic Science & Hospital, Sriganganagar Rajasthan.*

***PG Scholar, PG Department of Swasthavritta & Yoga, Sri ganganagar College of Ayurvedic Science & Hospital, Sriganganagar Rajasthan.*

**** Assistant Professor, PG Deptt. Of DravyaGuna, Sri ganganagar College of Ayurvedic Science & Hospital, Sriganganagar Rajasthan.*

***** Professor & H.O.D. PG Deptt. Of DravyaGuna, Sri ganganagar College of Ayurvedic Science & Hospital, Sriganganagar Rajasthan.*

Date of Submission: 15-11-2020

Date of Acceptance: 04-12-2020

ABSTRACT:- Jaggery is popularly known as "Guda". It is a pure, wholesome, unrefined form of sugar which contains the natural goodness of minerals and vitamins produced from sugarcane. Jaggery is used as a healthy sweetener. It is available in solid, liquid and powder form.

Jaggery is known as the "medicinal sugar" and is nutritionally comparable with honey. It has been used as a sweetener in Ayurvedic Medicine for 3000 years. Refined sugar mainly consists of glucose and fructose, jaggery contains glucose and sucrose. But jaggery also has minerals and vitamins which lacks in the refined sugar which makes it a better option over sugar. Ayurveda suggest numerous health benefits of guda for different health conditions.

KEY WORDS:- Guda, Refined sugar,

I. INTRODUCTION :-

Jaggery is a type of unrefined sugar, prepared from sugarcane or date juice. The juice is concentrated by heating and molasses is not removed while concentrating it. The end product is brownish yellow coloured solid jaggery blocks. Ayurveda gives much importance to Guda (Jaggery). Jaggery is a traditional product of sugarcane. Jaggery is popularly known as "Medicinal Sugar" among sugar industries in India. It has various health benefits to help in the overall wellness of a person. Jaggery is a pure, wholesome, unrefined sugar which contains the natural goodness of minerals and vitamins produced from sugarcane.

Review in literature:-

Ayurveda has given a detailed description of Guda regarding its preparation, forms, types, and properties. All most all Samhita, Nighantus have described about Guda in detail. It is used as aushadhi, anupana, ahara, and sandhandravya.

Charaka has given guna of Guda i.e. Krimi-Majja-shyonit-Meda-Mam avaradhak, in Sutrasthana, Annapanavidhiadhyaya. Final prepared shudhha Guda is alpadoshkar. 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, Annaj Trishna), Asava-Arishta (Abhayaristha, Dantyaristha, Phalaristha, etc.), content and binding agent (e.g. Shyamadi Vrti, Pinyaka Varti), anupana (Pippalyadi Ghrut), lepa (local application)-(Guda+Pippali+ChitrakadilepaandGuda+Arkashrit+SnuhiKsheer-Pralep in Arsha), after Panchakarma procedure (Gudayuktadughapana- after manshiladi Dhumpapana and Prapoundrikadi Dhumpapana), 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 vatajkasa, Haritaki Leha, in Swasa, Kasa, Drakshadi Leha-kasa) particularly.

Sushruta has mentioned about Guda and its properties in sutrasthanaadhyaya, Dravdravyavidhyaninya, specifically given pthyaapathya with ikshuvikara, Virudhhanna (1. Kakmachi & Guda. 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 vatrakta, vrana, dadru, Udara, Gulma, Vidradhi, and Kustha. 6 Vagbhat mentioned guda in Sutrasthana, dravdravyavdhyniya, shlok48, (AH.Su 5/48, 49). Navven Guda is kaphakarak and creates agnimandya while PuranGuda is Hridya, Pathya. Asthansangrahakara mentioned Guda in Sutrasthana, dravdravyavdhyniya, 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 Hemagarbhapottali rasa, Shital Jwaradi Rasa, Pathyadikwatha, Shadanga Kwatha, and used in many formulations, especially in asava-aristhakalpana 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 Shoola, Vibandha, Udavarta, Gulma, Vatgulma, 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 abhavdravyas. Bhaishjyarnatnavali given abhavdravya of Naveen Gudaas mentioned in the introduction. Considering the need of today's era, it may be the solution to prepare authenticates kalpa of Puraran Guda.

Nighantus 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 Pittaghna, Vatahar, ruchikara, Tridosahara, Jwarahara, Santapshanti-prada, Vinmutrashodhak, Agnijanak,

Snigdha, PanduPramehantaka, Laghu, Shramahara, Pathya. Narhari also mentioned paryaya (Synonyms) to Guda asIkshusara, Madhura, Rasapakaja, Shishupriya, Rasaj, Aruna, Sitadi denoting its significance. Bhavmishra mentioned NaveenGuda properties as Vrushya, Guru, Snigdha, Vatanashak, Mutrashodhan, Na-ati-pittakara, Medakara, Kaphakara, Krimikara, Balakara, Swasakara and PuranGuda is Laghu, Pathya, Anbhishandi, Agnijanaka, Pusthikruta, Pittaghna, Madhur, Vrushya, Vataghna, Raktaprasadaka. Bhavprakash has mentioned specific gunawith 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. In Kaiyadeva Nighantu, Guda is placed in Aushadhi Varga and he has given guna of Naveen Guda are Madhur, Ksharyukta, saraka, Vatpittavardhak, Agnideepaka, Snigdha, Rakta-Mutrasanshodhana, Medakara, Mamsakara, Krimikara, Majjarakara, Raktakara, Balavardhak, Shukrakara and Purana Guda is Madhur, Pathya, Ruchikara, Anbhishandi, Agnidipaka, and laghu. Kaiyadeva has given 1st time the specific duration of Naveen, Puran, and Prapurana Guda i.e. the particular kala when it should be called Naveen, Puran, or Prapurana. Kaiyadeva also gave that in the preparation of asava- aristha Prapurana 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. Mahendra Bhougika in Dhanvantari Nighantu Guda is mentioned in Karviradivarga and properties are Madhur, Guru, Kshariya, Ushna, Kapha-Vatahar, Ahit in Rakta-Pitta dusti while JirnaGuda is Rasayana, Balavardhak, Shukravardhak. Dhanvantari Nighantu also mentioned synonyms as Ikshusara, Madhura, and Rasapakaja. Madanpala Nighantu–Kshariya, Guru, Swadu, Vatpittakar, agnikrita, Sara, Balya, Krimijanan, Raktashodhan, Shleshmavardhan, are the properties of Naveen Guda while Hridya, laghu, Nabhishandi, Agnisandipana, Pustikara are the properties of Purana Guda. DravyagunaSangraha-Guda is Vrushya, Guru, Snigdha, Sakshara, Mutrashodhan, Na-atipittahara, Medakapha-hara and Purana Guda is Pathya and having more Guna. Madhava Dravyaguna Nighantu-mentioned properties like Na-ati-pittahara, Meda-Kapha-Krumikara. He is also given guna of PuranGuda as Pittaghna, Madhur, Snigdha, Vatahara, Asruk-prasadana, Pthya, etc. Rajvallabha Nighantu-Guda is

Guru, Vrushya, Snigdha, Vataghna, Mutrashodhan, Na-atipittakara, Meda-KrimiKapha-Balaprada (Increases all these things), while Purana Guda is Vatahara, Asrukprasadana, Pittaghna, Madhura, Snigdha, Pathya.

Effect Of Consuming Refined Sugar:-

1. SUGAR IS ADDICTIVE

Like drugs, sugar stimulates the release of dopamine, a “feel-good” chemical in the brain. As we consume sugar, our bodies create more dopamine receptors that lead us to crave more sugar, resulting in a vicious cycle of sugar consumption.

2. Sugar Damages Your Immune System

By lowering the efficiency of white blood cells for hours at a time after consumption, sugar compromises the immune system and hinders our ability to fight disease and infection.

3. Sugar Robs Your Body Of Essential Minerals

Besides being empty calories with no value in nutrition, sugar actually robs your body of essential minerals. Sugar causes essential minerals like sodium, potassium, magnesium and calcium to be leached from the body. This can weaken the teeth and bones, causing tooth decay and diseases like osteoporosis.

4. Sugar Can Lead To The Development Of Cancer

There is an old saying: “Cancer loves sugar.” Consuming too much sugar causes our bodies to produce excessive amounts of insulin, which encourages the growth of cells – a good thing for healthy cells, but not cancerous cells. Excessive sugar intake has been linked to increased risk for breast, colon, pancreatic, colorectal, and endometrial cancer.

5. Consumption Of Sugar Is Detrimental To The Liver

Refined sugar is half glucose and half fructose. The liver is the only organ that can metabolize fructose. When too much fructose enters the liver, it gets turned into fat that can build up over time and ultimately lead to disease.

6. Sugar Causes Insulin Resistance, Diabetes, And Weight Gain

Insulin drives glucose into cells from the bloodstream. Elevated blood glucose is toxic, so

when excessive amounts of glucose cannot be used properly the pancreas begins to secrete insulin in order to remove it from the bloodstream, leading the body to become insulin resistant. When the body becomes resistant to insulin, the pancreas stops doing its job properly, which is a contributing factor of type II diabetes. Insulin also signals the body to store fat, which leads to obesity.

7. SUGAR CAUSES PREMATURE AGING

Sugar can attach to proteins in the bloodstream, resulting in AGEs (Advanced Glycation End Products) that damage collagen and elastin production, which are responsible for maintaining skin’s elasticity.

8. Sugar Leads To Depression, Anxiety, Chronic Fatigue, Irritability, And Mood Swings

Consuming sugar leads to a spike in both blood sugar and feel-good serotonin levels in the brain. When the sugar withdraws from our system, we experience a “crash” creating a cycle of craving and bingeing in both our bodies and our minds. This is not fun for anyone.

9. Sugar Increases Hyperactivity In Children

Refined sugars enter the bloodstream quickly, producing rapid fluctuations in blood glucose levels that trigger adrenaline and make children more active.

10. Sugar Can Affect Your Cholesterol

High sugar consumption lowers levels of the “good” HDL cholesterol that helps remove LDL, or “bad” cholesterol from the artery walls, and has been shown to increase levels of triglycerides, a type of fat found in the blood that poses an increased risk for heart disease.

HEALTH BENEFITS OF JAGERRY OVER SUGAR :-

Jaggery, has a mineral content of approximately 60 times that of refined white sugar. One teaspoon of jaggery contains approximately 4-5 mg calcium, 2-3 mg phosphorus, 8 mg magnesium, 48 mg potassium, 0.5 mg iron, as well as trace amounts of zinc, copper, thiamin, riboflavin, and niacin. The corresponding values for white sugar are all essentially zero.

नातिश्लेष्मकरो धौतः सृष्टमूत्रशकृत् गुडः ॥ ४७ ॥

प्रभूतकृमि मज्जासृक् मेदोमांस कफोऽपरः ।

हृद्यः पुराणः पथ्यश्च, नवः श्लेष्म अग्निसादकृत् ॥ ४८

॥

(Reference: Ashtanga Hrudayam Sutrasthana 5/47-48)

Guda (jaggery, molasses), washed well (made white and purified)-

Natishleshma kara – does not increase Kapha to a large extent

Srushtamutrashakrut – increases volume of urine and faeces

If it is not prepared properly, it causes intestinal worms, increases chances of Kapha disorder in marrow, blood, fat tissue and muscles.

Old jaggery is good for heart, and should be consumed. So, jaggery should be at least one year old for its usage.

Freshly prepared jaggery increases Kapha and causes indigestion. 47-48.

jaggery health benefits - Ayurveda

Unrefined or unwashed jaggery is

Sakshara – slightly alkaline

Natisheeta – not very coolant

Snigdha – oily, unctuous

Mutrashodhaka – cleanses bladder and urine

Raktashodhaka – cleanses and purifies blood

Vataghna – balances Vata

Na ati pittajit – decreases Pitta slightly

Medakara – increases body fat

Krumikara – causes intestinal worm infestation

Balya – increases strength

Vrushya – aphrodisiac

Jaggery for splenomegaly

For the treatment of splenomegaly (Plihodara),

Haritaki – Terminalia chebula, in a dose of 3 – 5

grams once or twice a day, is administered along

with 2- 3 grams of jaggery. (Charaka Samhita

Chikitsa Sthana 13) Washed jaggery

Dhauta guda or washed jaggery is

Madhura – sweet

Vatapittaghna – balances Vata and Pitta

Asruk prasadana – cleanses and detoxifies blood

It has a more Pitta balancing action compared to

Adhauta (unwashed) guda.

Purana Guda – old jaggery

Svadutara – much more sweeter than the fresh

Snigdha – oily, unctuous

Laghu – lighter to digest, than fresh

Agnideepana – promotes digestion strength

Vitshodhaka – cleanses intestines and feces

Mutrashodhaka- cleanses urinary bladder and urine

Amashayashodhaka – cleanses stomach

Ruchya – promotes taste

Hrudya – good for heart, cardiac tonic

Pittaghna – balances Pitta

Vataghna – balances Vata

Tridoshaghna – Generally good for all the three Doshas

Jwarahara – Good for fever (in small quantities only)

Santapa shantiprada – relieves excess body heat

Shramahara- relieves tiredness

Panduhara – useful in anaemia

The qualities of guda helps in different health condition in different combinations suggested by Acharyas as with pippli and haritki . These health benefits directs towards the healthier option jaggery to be added in daily life rather then sugar.

II. CONCLUSION :-

Jaggery helps in maintaining the electrolyte balance and helps prevent water retention whereas sugar is responsible for inducing sudden blood sugar spikes which leads to weigh gain. Jaggery also has minerals and vitamins which lacks in the refined sugar. The mineral content of jaggery includes calcium, phosphorus, magnesium, potassium and iron and traces of zinc and copper. The vitamin content includes folic acid and B-complex vitamins. Thus, other than that it is a good source of energy, it also prevents rheumatic afflictions; prevents disorders of bile; helps in relieving fatigue, relaxation of muscles, nerves and blood vessels; maintains blood pressure and reduces water retention; increases hemoglobin level and prevents anaemia.

REFERENCES :-

- [1]. Agniveshkrit Drudhabala pratisanskrit Charak Samhita with vidyoniti Hindi commentary by pandit Kashinath Sastri and Dr.Gopikanath Chaturvedi edited by Pandit Rajeshwardutta Sastri et all part I, Chaukhamba Bharti Acadmy, reprint 2008, Sutrasthana 27/238-239, page No.553.
- [2]. Agnivesha krit, charak pratisansrit, Edited by Pandit KashinathCharak Samhita-Purvardha,reprint yr 2008.
- [3]. Ambikadatta Shastri ed, Sushruta samhita of Sushruta, Vol I, Reprint 2005, Chikitsasthan 2/10, Chaukhamba Sanskut Sansthan, Varanasi.
- [4]. Vagbhatkrit ashtangahridaya, Sartha Vgabhata, edited by Dr. Ganesh Krishna Garde Anmol Prakshan, Pune2, reprint 2008. Sutrasthana 5/48-49, page no. 21.
- [5]. Shastrilaxmipathy Vaidya, Yogratnakar with vidyotani hindi commentary Abhavarga,



- 2Ed, choukhamba Sanskrit pratishtana, Varanasi, reprint 2007. page no.111.
- [6]. Chakrapanidutta virachit, Chakradatta, Sastri Vaidya Ravidutta, , Chaukhamba Surabharati Prakashan, Varanasi 2012,
- [7]. Siddhinandan Mishra, Bhashajya ratnavali of kaviraj govindas sen, 1 st edition 2015, Chaukhamba Surbharati Prakashan, chapter 4.
- [8]. BhavmishraShribrahmasankara,Bhavprakash ,vol 1, reprint 2004, vidyotani hindi commentary by and Shrirupalaljivaisya , Choukhamba Krishnadas academy, Varanasi , pp 128.
- [9]. Kaiyadev Krit-KaiyadevaNighantu-Edited by Acharya Priyavat Sharma-Aoshadhivarga.
- [10]. Shstri J.L.N, Dravyaguna Vijnana, Vol 1, Chaukhamba Orientalia, Reprint 2012, Varanasi, page No.45,47
- [11]. 11.S. Gulati, A. Misra, Sugar intake, obesity and diabetes in India, Nutrient. 6 (12) (2014)5955–5974..
- [12]. P.V.K. Jagannadha Rao, M. Das, S.K. Das, Jaggery - a traditional Indian sweetner, Indian J Tradition Knowl 6 (2007) 95–102.
- [13]. P. Shrivastav, A.K. Verma, R. Walia, R. Parveen, A.K. Singh, A. Jaggery, Revolution in the field of natural sweetner, EJPMR 3 (3) (2016) 198–202.
- [14]. Prashant R. umate, Meena Deogade, Akshay Pargaonkar, Jaya P. Umate, Lata Kanyal. Comparison of properties of Naveen, puran suryatapi guda (jaggery) with respect to guru and laghu guna -an observational study.
- [15]. M.A Harish Nayaka, U.V. Sathisha. ,M.P. Manohar, K.B. Chandrashekar, Shylaja M. Dharmesh Cytoprotective and antioxidant activity studies of jaggery sugar.
- [16]. James M. Rippe and Theodore J. Angelopoulos . Relationship between added sugar consumption and chronic disease risk factor: current understanding.