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ROLE OF JAGGERY (*GUD* / *GUR*) IN CHILDREN DIET: AN AYURVEDA REVIEW

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ABSTRACT

Jaggery is most commonly used sweetener for children; Jaggery is prepared by boiling pure clarified sugarcane juice. Panela, Kokuto, Gur, Rapadura and Hakura, etc. are other global name of Jaggery. More than 70% of the jaggery is being produced in India.[1] The per capita consumption of Jaggery was 26.47 kg / annum in 2005.[2]

KEYWORDS:

Jaggery is available in the market mainly in three forms namely solid jaggery (80%), liquids jaggery and granular jaggery (20%). Chemical composition of liquid is water 30-36% and sucrose 40-60%. It utilised as sweetening agent in foods and drinks, also used in pharmaceutical preparations.[3] The composition per 100 gm of granular jaggery is 80-90 gm sucrose and it can be stored for longer time (more than two years).[4] The caloric value of granular jaggery is same as compared to solid jaggery. Colour of jaggery is golden brown to dark brown depending upon the colour of cane. The shape of jaggery is rectangular (250 gm-1 kg), bucket shaped (10-20 kg) and trapezoidal lumps (5 kg), etc.

Gud (Jaggery) is mentioned under *Ikshu varga* in ayurvedic textbook with its properties.[5,6] Jaggery possess different qualities depending upon how old it is, it may be from date of manufacture to one year old, up to two years old, up to three years and older than three years. Jaggery also offers different properties depending upon *Anupana* (vehicle) used with Jaggery. It is commonly used in many food products of children.[6]

Ayurveda *Acharyas* mentioned uses of Jaggery as *Rasayana*, as medicinal *Yogas* for diseases and as *Anupana* in drugs.

Ayurveda Aspect of *Gud* (Jaggery)

Gud (jaggery) is mentioned under *Ikshu varga* in ayurvedic textbook:

गुडो वृष्यो गुरुः स्निग्धो वातघ्नो मुत्रशोधन: // नतिपित्तहारो मेद: कफकृमिबलप्रद: //२५// (भा.प्र.)

Ayurveda classics suggested following therapeutic properties of Jaggery:

- ✓ It having strengthening property
- ✓ It purify urine
- ✓ It reduces *Vata*
- ✓ Increases fat and built up body

The characteristics of Jaggery are as follows:

- It is hard to digest
- Unctuous in nature
- Increases *Kapha*
- Possess sweet taste that remain in mouth for longer period of time

Properties of New Jaggery[5]

The new Jaggery is that which is not older than one year (बृहन्निघंटुरत्नाकर), the characteristics properties of new Jaggery described as follow in Ayurveda text:

गुडो नवः कफ श्वास कास क्रिमिकरो S ग्निकृत /२७// (भा.प्र.)

- ➢ New Jaggery increases *Kapha*
- ➢ Produces *Swasa Kasa* diseases & worm infestation
- ➢ New Jaggery acts as appetizer
- ➢ Increases *Shukra-Majja-Mansa-Rakta*
- ➢ Reduces *Pitta* & *Vata*
- ➢ Heavy to digest.

Properties of Old Jaggery (भा.प्र.)

गुडो जीर्णो लघुः पथ्योSनभिष्यन्द अग्निपुष्टिकृत/ पित्तघ्नो मधुरो वृष्यो वातघ्नोSसृक्प्रसादनः//२६//

- ❖ Easy to digest
- ❖ Sweet
- ❖ Not produces moisture

- Reduces *Vata*
- Increases diet and blood
- Reduces *Pitta*
- Possess *Rasayana* effect
- Pacify *Tridosha*
- Useful in *Pandu Roga* in children

Properties of three year old Jaggery (बृहन्निघंटुरत्नाकर)

स्त्र्यब्धजीर्णो लघुः स्मृतः / सर्वदोषहरः श्रेष्ठः पुराणेषु चउत्तमः// अरिष्टदिषुयोज्यः स्याद्:...../

(बृहन्निघंटुरत्नाकर)

- Easy to digest
- Possess pleasant qualities
- Pacify all *Dosha*
- Used in *Arishta* preparation

Properties of more than three year old Jaggery

उर्ध्वहीनगुणः स्मृतः.../ (बृहन्निघंटुरत्नाकर)

Guda older than three years lost its all properties.

Jaggery in Children Diet

1. *Gud* should be used daily in children diet.
2. New *Gud* should not be used in children diet; it should be minimum one year old.
3. Old *Gud* can be used in the treatment of *Pranavaha* and *Raktavaha Strotas vydhi*.
4. Daily uses of *Gud* helps in weight gain in children.
5. For children, Jaggery is a wholesome diet.
6. It is rich in important minerals and vitamins and protein which help to diminish the problems of malnutrition and under nutrition in children.
7. Jaggery is useful in anaemic children.
8. Jaggery provides calcium in children and help in digestion.
9. Magnesium found in jaggery strengthens the nervous system of children.
10. Potassium conserves the acid balance in the cells.
11. The micronutrients present in jaggery have antitoxic and anticarcinogenic properties.[7]
12. It has moderate amount of calcium, phosphorous and zinc, so it helps to maintain optimum health of children, purifies blood and prevents bile disorders; jaundice.

Nutritional value of Jaggery

S. No.	Minerals in Jaggery (mg / 100 g of Jaggery)		Vitamins in Jaggery (mg / 100 g of Jaggery)	
1	Calcium	40-100 mg	Vitamin A	3.8 mg
2	Magnesium	70-90 mg	Vitamin B1	0.01 mg
3	Potassium	1056 mg	Vitamin B2	0.06 mg
4	Phosphorus	20-90 mg	Vitamin B5	0.01 mg
5	Sodium	19-30 mg	Vitamin B6	0.01 mg
6	Iron	10-13 mg	Vitamin C	7.00 mg
7	Manganese	0.2-0.5 mg	Vitamin D2	6.50 mg
8	Zinc	0.2- 0.4 mg	Vitamin E	111.30 mg
9	Copper	0.1-0.9 mg	Vitamin PP	7.00 mg
10	Chloride	5.3 mg	---	-----

Benefits of Jaggery in children diet are listed as follows

1. Rich in mineral salts
2. Easy to digest
3. Treats anemia, malnutrition, jaundice, asthma, allergies in children.
4. Jaggery is very good cleansing agent. It cleans oesophagus, respiratory tracts lungs, stomach and intestines. This can keep children safe from asthma, cough & cold.
5. Jaggery has anti asthmatic property also eases breathing difficulties.[8]
6. Balances the deficiency of sugar level.
7. It is very effective in increasing the overall immunity of the body.
8. Its dietary intake can prevent the atmospheric pollution related toxicity and the incidence of lung cancer, Jaggery increases overall life span.[9,10]

CONCLUSION

The literature study suggested that age of the Jaggery play an important role in its properties thus for optimum therapeutic values the older Jaggery should be used, uses of new Jaggery not advocated in children diet. Jaggery older than one year but not more than three years considered good for the children diet.

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