



“Role of *laja manda* in the management of *Atisara* (diarrhea) from Ayurvedic and modern perspective.”

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ABSTRACT:-

Ayurveda is a holistic life science. It emphasizes more on preventive aspect than curative aspect of the disease. Hence, more importance has been given to appropriate *ahara* (dietary regimen), *vihara* (lifestyle regimen) than *ausadhi dravya*. *Ahara* is the main pillar of a body so called as *mahabhaisajya*. The *ahara* and *vihara* which are beneficial, nutritious and gives happiness to the mind is known as '*Pathya*' and the opposite is called as '*Apathya*'. *Pathya* not only advocates intake of wholesome food but it also directs to follow a certain regimen to fasten the process of recovery from the diseased state. '*Pathya Kalpana*' is one of the unique concepts in Ayurveda in which food recipes are used as medicines. It helps to maintain proper *agni* (digestive fire) so as to digest food properly and give needed nutrition to tissues of body. Such recipes are prepared by using *aushadhi dravyas* and

food as base. Since *pathya kalpana* is the combination of medicines as well as food, it is not only useful in treating the disease but it also becomes palatable and pleasing. *Laja Manda* (scum of parched paddy) is one of the famous and routinely used *pathya kalpana* in diseases like *atisara* (diarrhea), *chhardi* (vomiting), *jvara* (fever).

The purpose of present study is to understand the role of *laja manda* in the management of *atisara* (diarrhea) from both ayurvedic and modern perspective.

KEY WORDS:- *Agni Sansakara, Atisara, Diarrhea, Laja manda, Pathya Kalpana.*

INTRODUCTION:-

Ayurveda is holistic science which has emphasized more on maintenance of health and prevention of disease rather than treating the disease¹. Health of the person can be maintained by following *dincharya* and

rutucharya described in Ayurveda. Appropriate *ahara* plays an important role in sustaining and attaining good health². *Ahara* is main pillar of a body so called as *mahabhaisajy*³.

Pathya Kalpana is one of the unique concepts in *Ayurveda* one can alter the properties of *dravya* with the help of *kalpana*. '*Pathya kalpana*' comprises of the ways of preparations which will maintain the "*patha*" i.e. channels or systems of body healthy and will also be comfortable to mind⁴. The things opposite to these are considered as '*Apathya*'.

Acharya Sharangdhara explains about some *pathya kalpana* like *manda*, *peya*, *vilepi*, *yavagu* etc⁵. These *kalpana* are generally used in different diseases according to state of disease and capacity to digest the food in that disease. It also helps to maintain proper *agni* so as to digest food properly and give needed nutrition to tissues of body. Selection of proper *pathya kalpana* has significant role for changing the action of a *dravya*. *Pathya kalpana* includes selection and preparation of the food according to personalized need.

In *pathya kalpana* food is processed with the help of *aushadhi dravyas* (*aushadhi siddha ahar*). As *pathya kalpana* is the combination of medicines as well as food, it is not only useful in treating the disease but it also becomes palatable and pleasing. Hence *pathya kalpana* are easily digestible, quickly absorbable, fast acting and give adequate amount of energy to body.

Atisara (diarrhea) is most commonly encountered disease in clinical practice. '*Ati*' means excess and '*saranam*' is *gati* or flow.

Therefore *atisara* is a condition where watery stools are passed in excess, several times a day, through *guda*. Most important factor in the pathogenesis of *atisara* is *mandagni*. Due to consumption of etiological factors *apa dhatu* (watery elements) is increased which leads to *agnimandya* and *ajeerana*. *Vimargagam apdhatu* gets mixed with the stool, causes downward movement in *annavahasrotas* by *vata* leading to increase in *dravata* of *pureesha* in *pakwasaya* manifesting as *atisara*⁶.

Laja manda is one of the famous and routinely used *Pathya kalpana* i.e. dietary medicine in diseases like *atisara*, *chhardi*, *jvara*, etc. *Laja manda* is prepared by adding *laja* to Water in the ratio of 1:14 and cooked on low flame till *lajas* get cooked⁷. *Laja Manda* is *Laghu, dipan gunatmaka* and *aap mahabhuta pradhana* hence it is easy to digest, ignites the digestive fire and also helps to replenish the *drava dhatu* like *rasa* without deranging digestion. Thus, the purpose of present study is to understand the role of *laja manda* in the management of *atisara* by *ayurvedic* and modern perspective.

AIM AND OBJECTIVES:-

To understand the role of *laja manda* in the management of *atisara* (diarrhea) by *Ayurvedic* perspective and from modern point of view.

To study the standard operating procedure of *laja manda* thoroughly.

MATERIALS AND METHODS:-

Literary references from ayurvedic classics and modern medical text along with journals were collected and analytically reviewed to evaluate role of *laja manda* in *atisara* management by ayurvedic and modern point of view.

REVIEW AND DISCUSSION:-

Standard operating procedure of *laja manda*:

Standard operating procedure of *manda kalpana* by *Sharangdhar Samhita* has to be taken into consideration. Genuine species of *laja* should be taken. *Laja* is prepared by parching the rice in sand bath⁸. The husks open out and the rice swells into light body. Here, *sanskara* concept of Ayurveda should be taken into consideration. *Sanskara* means processing, which would result in the transformation of the *gunas* (inherent qualities) of the substance⁹. Due to *agni sanskara*, *guru* (hard to digest) and *pittala* (vitiating *pitta*) *vrihi* (rice) transforms into *laja* which is *laghu* (easy to digest) and *pittahara* (pacifies *pitta*).

Laja manda is prepared by using *laja* and water in 1:14 proportion. The *laja* is cooked in said proportion of water on low flame till *lajas* get cooked and filtrate obtained. i.e. water content of the prepared formulation is collected as *manda* (watery portion of rice gruel)¹⁰.

The major step in this recipe is cooking i.e. *agni sanskara* which make the recipe *laghu* (easy to digest). In *atisara* the digestive capacity is low, so such *laghu* recipe is preferred in Ayurveda. According to modern science, water after boiling gets disinfected which is useful in diarrhea having infective pathology.

Properties of *laja manda*: *Laghu* (light in digestion), *Sheeta* (cold).

Biological actions: *Deepana* (increase in appetite), *Pachana* (increase in digestive capacity), *Grahi* (reduces water content in feces), *Vatanulomaka* (maintains normal functioning of *vata* humour), *Kaphaghna* (pacify *kapha* humour)¹¹.

Indications: *Jwara* (Fever), *atisara* (Diarrhea), *trishna* (Excess Thirst)¹².

Name of the formulation	Proportion of <i>laja</i>	Proportion of water	<i>Siddhi lakshana</i>	Final constitution of prepared formulation	Biological properties	Indication
<i>Manda</i>	1 part	14 parts	Till the <i>lajas</i> Cooked. completely	Only supernatant Liquid.	<i>Deepana</i> , <i>Pachana</i> , <i>Grahi</i> , <i>Vatanulomaka</i>	Useful in treatment of <i>Jwara</i> (fever) <i>Atisara</i> (diarrhea)

Pathogenesis of *atisara*:-

Over-indulgence in foods which are very heavy(hard to digest), very fatty, very dry, very hot, very watery, very hard, very cold; which contains incompatibles, taken in large quantities very frequently; which are not cooked, and taken at unusual times; excess or improper usage of therapies like oleation etc., poisons, fear, grief, drinking of polluted water, excess of alcoholic drinks, changes in accustomed habits and seasonal features, over-indulgence in water sports, suppression of natural urges of the body, and infestation by worms(intestinal parasites) are the etiological factors for *atisara*¹³.

These can be categorised under five broad headings as viz. *aharaja*, *viharaja*, *manasika*, *agantuja nidanas* and *atisara* due to some other diseases. These may act as *viprakrusta nidana* (Distant causes) or *sannikrishta nidana* (immediate causes) or both.

Due to consumption of etiological factors *apa dhatu* (watery elements) is increased in excess quantity which brings forth diminution of strength of *agni*, gets mixed with the feces, causes downward movement in *annavahasrotas* by *vata* leading to passage of excess watery stool is known as *atisara*.

Management of *atisara* by Ayurvedic view:

There are two different protocols in the management of *atisara* according to *sam* and *niram avastha*. In *amavastha*, *agni* is so diminished that it is unable to digest any

kind of food. Hence in such condition, *langhan* i.e. fasting is indicated. In *niram avastha* or *pakvavastha*, the dietary medicines like *yavagu*, *manda* etc are indicated chronologically according to strength of digestive fire as per *Sushruta*¹⁴.

Matra (Dose): The *matra* of *manda kalpana* is not clearly mentioned in Ayurvedic text. Since *laja manda* is food based dietary medicine, the dose of it should be according to capacity of digestive fire according to *Charaka*¹⁵.

Time of Administration: According to *Charaka*, *manda kalpana* is '*pranadharana*'¹⁶ i.e. it acts on *pran vayu* So time of administration should be *muhurmuhu* i.e. frequently.

Indication: *Laja manda* is more beneficial in *niram avastha* of *atisara*.

Synergetic action: The action of *laja manda* is increased by adding drugs like *pippali*, *nagara* (*Sunthi*)¹⁷ etc.

Role of *laja manda* in the management of *atisara*:

The main event in the pathogenesis of *atisara* is diminution of strength of *agni*. The basic treatment in *atisara* is to increase the strength of diminished digestive fire i.e. *jatharagni dipana*. In such condition, *laghu*, *dipana* (to evoke digestive fire), *pachana* (to ignite digestive fire) *dravyas* are indicated.

Laja manda (scum of parched paddy) relieves thirst, diarrhea, improves appetite, agreeable, beneficial in fainting and heartburn. It is especially beneficial for

women, children and weak persons. It helps to correct *agnimandya* in *atisara* as it is called ‘*agni janana*’ (evokes digestive fire). It also gives adequate amount of energy as well as it is good appetizer. *Laja manda* also does the *vatanulomana* i.e. it corrects the movement of perturbed *vata*¹⁸. *Yog Ratnakara* has also mentioned *laja manda*, as one of the *pathya ahaar* in *atisara*¹⁹. It also helps to relieve associated symptoms like *trishna* (thirst), *daurbalya* (weakness), *bhrama* (fainting) in *atisara*. In *atisara* although the excessively increased *apa dhatu* is being excreted out of the body in large amount, still *trishna* is significant symptom which needs attention according to *Vagbhata*²⁰. In *samavastha* one cannot advice water intake to patient and if this thirst is not satisfied it may result into death. Here *laja manda* plays an important role. *Laja manda* though being *apa mahabhut pradhana* yet due to its *laghu, dipana guna* plays a dual role of satisfying the *trishna* and yet not deranging strength of *agni*. *Laja manda* is *laghu gunatmaka* hence easy to digest, *dipangunatmak* which ignites the *agni*. Being easily digestible it helps to replenish the *drava dhatus* and thus does ‘*tarpan karma*’.

Management of dehydration in diarrhea:

Fluid and electrolyte replacement are of central importance to all forms of acute diarrhea. Fluid replacement alone may suffice for mild cases. Oral solution should be administered promptly with severe diarrhea to limit dehydration, which is the major cause of death. Massive diarrhea with watery stools results in marked depletion of sodium, potassium and bicarbonate ions.

Role of Oral Rehydration Therapy (ORT):

It has been demonstrated that sodium and water absorption by the small bowel is very much enhanced by the addition of glucose to oral fluid. Dehydration can therefore be successfully treated with oral fluids containing glucose, once the initial hypovolemia is corrected by 2-4 liters of IV fluid replacement. Moderate dehydration and acidosis due to diarrhea can be corrected in 3-6 hours by oral therapy alone. One teaspoonful given to a child every minute can provide 200-300 ml per hour. Adults can take 750-1000 ml. per hour for several hours until signs of dehydration disappear and abundant pale urine is produced.

Tab.1. Composition of ORS recommended by World Health Organization²¹:

Ingredients	Quantity (Wt. in gm.)
Sodium Chloride	3.5
Pottassium Chloride	1.5
Sodium Bicarbonate*	2.5
Glucose	20
Water	1000 ml

*Trisodium Citrate dehydrate 2.9gm can replace sodium bicarbonate. Citrate in ORS has been found to diminish stool output in high output diarrhea.

Proper institution of ORT would avoid shock from continuing dehydration cholera and other diarrheas.

Role of *laja manda* in diarrhea management as Oral Rehydration Solution (ORS):

The correct concentration of Na⁺ and glucose in the ORS is critical for optimal effect and safety. The ORS administered can't greatly exceed plasma in osmolality without the risk of increased diarrhea and hypernatremia. Fortunately, nature has provided foods containing starches which have low osmolality in solution.

Tab. 2. Composition of *Laja manda* ²²

Ingredients	Weight
Fat	0.14 g/100g
Proteins	0.33 g/100g
Carbohydrates	0.74 g/100g
Energy Value	5.54 Kcal/100g
Iron	< 0.005 mg/100g
Calcium	0.84 mg/100g
Sodium	2.34 mg/100g
Potassium	1.73 mg/100g

Studies have indicated that ORS in which food sources of starch are substituted for glucose effectively replaced lost fluids, decrease vomiting and reduce severity of diarrhea. Several studies have now shown that cereal (rice) based solutions are equally effective in reducing volume losses and may also shorten the duration of illness. Physiologically, cereal based ORS are identical to their glucose based counterparts. The dominant component in the cereal is starch. Starch is a large polymer of glucose that, on exposure to amylase in the intestine is digested into smaller polymers that are then split by maltase into glucose molecules with which to transfer sodium ions from lumen into the blood, while generating less luminal osmotic "back drag" that would the direct ingestion of an equivalent amount of glucose. The cereal proteins also provide small peptides and amino acids which also

facilitate the absorption of additional sodium ions.

The traditionally used *laja manda* is also the cereal (rice) based solution. Since it is prepared from *laja* i.e. parched paddy. So it is also good source of starch, proteins and minerals. Hence the above actions of cereal based ORS can be effectively achieved by *laja manda*. *Laja manda* is less expensive. No expert is needed to prepare and to administrate it. So from the above discussion it can be concluded that *laja manda* would be ideal ORS in correcting dehydration in diarrhea.

CONCLUSION:

- *Agni sanskara* has very important role in preparation of *laja manda* which make it *laghu*. (easily digestable)
- *Laja manda* is *laghu gunatmaka* hence easy to digest, *dipana gunatmaka* which ignites the digestive fire.
- *Laja manda is apa mahabhuta pradhana* dietary medicine helps to replenish the *drava dhatu* like *rasa* without deranging digestion.
- *Laja manda* also helps to relieve associated symptoms like *trishna, daurbalya, chhardi, bhrama* etc.
- *Laja manda* is cereal based solution so it is good source of starch protein and minerals which replenish the electrolyte loss in diarrhea.
- *Laja manda* would be the ideal oral rehydration solution in correcting dehydration in diarrhea.

- *Laja manda* is easy to prepare and less expensive also no expert is required for its administration.

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