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SHANKHA BHASMA; AYURVEDA PERSPECTIVE IN PEDIATRIC G.E.R.D.; A REVIEW

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Abstract

Acid reflux disease also termed as Gastro-esophageal reflux disease (GERD) which involves upward movement of acid from the stomach into the esophagus. Many people world widely facing this issue, in Ayurveda this condition can be correlated with *Amlapitta* on the basis of sign and symptoms. GERD possess typical symptoms like; *Avipaak, Klama, Utklesa, Tikta-Amla Udgaar, Gauravata, Hrit-Kantha Daha* and *Aruchi*, etc. Ayurveda described many treatments for GERD and most of the therapies help to eliminate morbid *Pitta*. *Vamana, Virechana*, oral medications including *Rasayana* therapy and good conduction of *Ahara-Vihara*, etc. are recommended in such types of pathological conditions. Disease modifiers and rejuvenators like *Shankha Bhasma* offer specific health benefits in case of GERD. *Shankha Bhasma* calcium containing formulation primarily suggested for gastrointestinal disorders like *Grahani, Amlapitta, Udarshula, Atisara* and *Parinamshula*, etc. Considering therapeutic perspective of *Shankha Bhasma* in gastric troubles present article explored role of *Shankha Bhasma* for infantine GERD.

Key-Words: *Ayurveda, Shankha Bhasma, GERD, Amlapitta*

Introduction

GERD is gastric problem and can be compared to *Amlapitta* on the basis cardinal features; in this condition *Pitta* attains excessive *Amlata* especially due to the indulgence in *Pitta* aggravating *Ahara-Vihara*. Heartburn, indigestion, sour belching, tastelessness and bloating, etc. are main features of disease. *Viruddha & Dushta Ahara, Amla Ahara, Vidahi Ahara, Pitta Prakopaka Paana Anna & Pitta* aggravating *Vihara*, etc. can leads disease pathogenesis [1, 2]. The major symptoms of disease as per Ayurveda depicted in **Figure 1**.

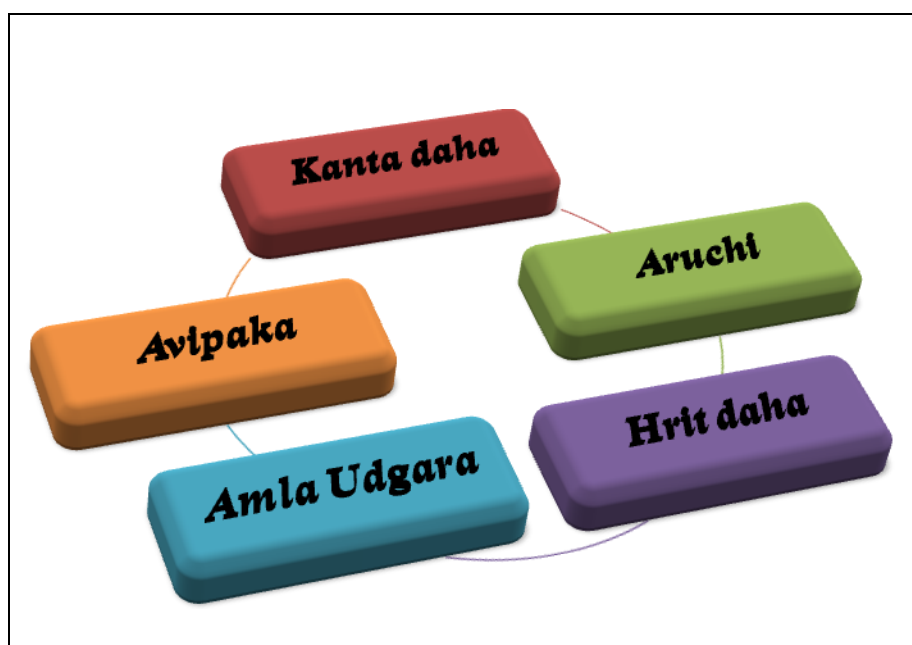


Figure 1: Symptoms of GERD (*Amlapitta*) as per Ayurveda

Pediatric gastroesophageal reflux disease (GERD)

Pediatric gastroesophageal reflux disease associated with immature functioning of organs in pediatric age group related with diminishes state of esophageal sphincter function. Pediatric gastroesophageal reflux disease mainly involves symptoms of vomiting or intense nausea however intense heart burn does not observed in children as like in adult patients. Respiratory problems, esophageal inflammation and weight gaining difficulty, etc. are major complications of GERD in children. Anorexia, pain after meal, discomfort when swallowing and pain during lying down, etc. also observed in pediatric GERD.

Samprapti Ghatakani of GERD in Children

| | |
|-------------------|--------------------------------|
| ✚ Dosha: | <i>Pitta</i> |
| ✚ Kapha: | <i>Kledaka Kapha</i> |
| ✚ Agni: | <i>Jataragni</i> |
| ✚ Dushya: | <i>Rasa</i> |
| ✚ Srotas: | <i>Annavaha & Rasavaha</i> |
| ✚ Ama: | <i>Jataragni Janya Ama</i> |
| ✚ Udhbhavasthana: | <i>Amashaya</i> |
| ✚ Rogamarga: | <i>Abhyantara</i> |

Ayurveda also described characteristics features of pediatric GERD like; *Gurukoshta*, *Amlotklesha*, *Vitbheda*, *Hritshoola*, *Angasada*, *Anthrakoojanam* and *Udaraadhmana*. In children *Urdhwaga Amlapitta* associated with vomiting which may be yellow in colour, sour and sticky material consisted of *Kapha*. *Aruchi*, *Kaphaja* fever, *Kandu* and irritation are associated features of *Urdhwaga* GERD in children [3-5].

Ayurveda formulations such as; *Tiktakam Kashayam*, *Drakshadi Kashayam*, *Indukantham Kashayam*, *Sukumaram Kashayam*, *Mahatiktakam Kashayam* and *Patolakaturohinyadi Kashayam*, etc. suggested for disease management. Ayurveda focuses to follow disciplinary and regimen to pacify vitiated factors in GERD. The classical literature suggested uses of drug like *Shankha Bhasma* in such types of condition since this drug helps to reduces disease pathogenesis. *Shankha Bhasma* is well known from *Vedic* period and it is mainly prepared from *Vamavarta Shankha*. *Shankha Bhasma* comes under *Sudha Vargeeya dravya* thus offers *Madhura*, *Laghu* & *Seetala* properties therefore imparts good effects in *Amlapitta* [6-8].

The *Shankha bhasma* is prepared by converting *Shankha* into small pieces using iron mortar and pestle, treated with lemon juice and washed with warm water. Alternatively it is also prepared by boiling in *Dolayantra* amidst sour gruel for few hours and finally washed with warm water. Purified *Shankha* should be covered in earthen plate, sealed,

dried and incinerated in a *Gajaputa*. Finally *Bhasma* form of purified *Shankha* obtained after two incineration process. This purified *Shankha bhasma* can be used as antacid, anti-diarrheal agent, appetite stimulant, antispasmodic agents, calcium supplement and antioxidant [8, 9].

Role in GERD:

Shankha bhasma possess *Katu Rasa, Laghu, Ruksha & Tikshna Guna, Ushna Virya, Katu Vipaka, Kshaar* (alkalizer) *Prabhava* thus pacifies *Tridosha* mainly *Kapha & Pitta* responsible for gastric trouble and helps in health problems of abdomen region. The *Kshaar* (alkalizer) effect of formulation neutralizes excessive hydrochloric acid produced in case of GERD and thus provides relief from hyperacidity. *Shankh bhasma* help to digest *Ama* which acts as toxins and involved in disease pathogenesis. *Shankh Bhasma* reduces cardinal symptoms of GERD such as; hyperacidity, loss of appetite, indigestion, flatulence, bloating and cramps.

Shankh Bhasma boosts functioning of liver therefore improves digestion process and most of acid secreted from stomach utilized here, moreover it imparts beneficial health effects on spleen, intestines and gall bladder therefore pacify causes of indigestion and reduces production of *Ama*.

Shankha Bhasma relief condition of frequent motion; specifically when small amount of stool passed through defecation with cramps and abdominal gas.

Shankha Bhasma is useful in abdominal distension, reduces abdomen heaviness, nausea, gas and burning sensation.

Shankha Bhasma possesses antispasmodic action since it relaxes abdominal muscles; cure diarrhea and relives severity of hyperacidity.

Shankha bhasma helps in nausea and vomiting which are major symptoms of GERD, *Shankha bhasma* imparts *Shodhan* effects thus removes accumulated toxins and pacifies circulation of acid secreted from stomach. *Shankha bhasma* when administered with *Amalki churna* then it shows effective result in case of GERD [9-11].

Management of Pediatric GERD

In children management of such disease needed avoidance of causative factors (*Nidana Parivarjana*). Uses of *Deepana Pachana* drugs, maintenance of hygienic condition and control of dietary regimen are main modalities utilizes in case of pediatric GERD.

The *Shankha vati* generally suggested to get early symptomatic relief however uses of *Shankha bhasma* as *Rasayana* also advised to acquire *Pitta Shamana* and *Agnideepana* effects. The *Kapha harana*, *Amapachana* and *Mooda vata anulomana* properties of formulation help to reduce severity of GERD in children. The *Ushna gunayukta dravyas* of *Rasayana* drug causes *Pitta shamaka* effect, disintegrates aggravated *Doshas* and toxins, ultimately facilitate their elimination from body [12, 13].

- ✚ **Katu Rasa** of *Shankha bhasma* helps in to reduce acidic feeling in mouth & throat
- ✚ **Laghu Guna** improves reaches of drugs at the site of action
- ✚ **Ruksha & Tikshna Guna** of formulation helps to improves process of digestion thereby reduces severity of hyperacidity
- ✚ **Ushna Virya** of *Shankha bhasma* helps to break pathogenesis of disease
- ✚ **Kshaar Prabhava** imparts alkalinity therefore neutralizes adverse effects of excessive acid secreted from stomach.

Dosage

The dosage of *Shankh Bhasma* in children is ranging from 60 mg to 250 mg; however it should be as per thr directed by physician whenever prescribed for infantine purpose.

Side Effects When used for children it may possess some side effects including fine cuts on tongue if used without honey, constipation may also observed sometimes. Therefore it is suggested to use this drug always with adjuvant.

Contraindication: Contraindicated in case of sever constipation, not recommended for emaciated children and should not used for children susceptible to allergic reactions.

Conclusion

Shankha bhasma is very useful for gastrointestinal disorders and it is recommended for many related disorders such as; *Amlapitta*, *Grahani*, *Udarshula*, *Parinamshula* and

Atisara, etc. *Shankha Bhasma* acts as antacid, antispasmodic, anti inflammatory and anti diarrheal agents thus relieves symptoms related to the GERD. The nano-sized particles of in *Shankha Bhasma* provide selective and targeted delivery of drug molecule at the site of action quickly therefore imparts fast and potent effects.

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