

REVIEW ON MALNUTRITION IN AYURVEDA

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ABSTRACT

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Paediatric population contribute major portion of patients in clinical practice. The childhood period is considered as the foundation of better life and every incidence has influence on the further life. The childhood malnutrition is an enduring problem in developing countries. *Ayurveda* is based on curative as well as preventive measures. Many common health problems are due to inadequate or improper foods. Nutritional disorders are described in scattered manner in *Ayurvedic* texts. *Balshosha* disease similar to PEM (Protein Energy Malnutrition) is one of the diseases related to *Rasavahastrotasa*. *Balshosha* (PEM) is a physical condition or process that results from less intake of proper food and due to low immunity infection takes place and is

characterized by poor growth, reduced cognitive development etc. Prevention and management of *Balshosha* in *Ayurveda* is by improving *agni* and immune power of child through proper nutritious diet and use of herbal medication. This review article highlights various etiological aspects and management of *Balshosha* (PEM).

**KEYWORDS:** *Balshosha*, Malnutrition, Nutrition, Ayurveda etc.

## INTRODUCTION

Childhood malnutrition is still one of major public health problems today due to its magnitude and disastrous consequences on children's development and survival. Maximum death of children is occurring due to malnutrition in developing countries.<sup>[1]</sup> Nutrition is directly related with growth and development. Childhood is the period where maximum growth and development will be achieved. To fulfil the required caloric demand of the growing body adequate nutrition has to be supplemented to the child. Food taken should be a complete food containing all the essential components like protein, fat, carbohydrate, minerals, vitamins and water.

Undernutrition is a condition in which there is inadequate consumption, poor absorption or excessive loss of nutrients and sometimes malnutrition and protein energy malnutrition are used interchangeable with undernutrition. *Balshosha*, in which the presence of *shosha* is nothing but emaciation of body due to depletion of subcutaneous fat and tissue.

**Epidemiology** - Childhood undernutrition is an underlying cause in an estimated 45% of all deaths among under 5-year age children. According to the National Family Health Survey (NFHS) 4, carried out in 2015-16, 36% of India's children under the age of five are underweight, 38% are stunted and 21% are wasted. Proportion of underweight children in rural area (38%) is higher than urban area (29%). During first six months of life, 20-30% of children are already undernourished, often because they were born low birth weight. The proportion of undernutrition and stunting starts rising after 4-6 months of age.<sup>[2]</sup>

## AIM AND OBJECTIVES

- To study of *Balshosha*
- To study Protein Energy Malnutrition under Ayurvedic aspect

### *Balshosha*

Pathology of development of *Balshosha* is almost similar to Protein Energy Malnutrition. The calories requirement of growing child will be deprived of proper nutrition in following condition: -

1. Poor nutrition
2. Social issues
3. Malnutrition
4. Mal absorption
5. Surgical problem
6. Faulty method of food intake
7. Increased demand and poor supply
8. Recoveries or suffering from chronic disorders

***Nidan / causes of Balshosha***<sup>[3]</sup>

1. *Atiswapna* (excessive sleeping)
2. *Ati-umbu sevena* (excessive intake of water)
3. *Ati-shitambu sevena* (excessive intake of cold water/fluid)
4. *Shlaishmik stanya sevana* (*kapha* vitiated breast milk)

Due to above causative factors *kapha* will abnormally increase in the body and leads to *Agnimandya* and *avarodh* in *rasavahastotasa* and in turn leads to *Aama* formation which further results in *shosha* in body. The total body digestion and metabolism gets hampered with decreased production of metabolic end products due to which tissues suffer badly and results into depleted *dhatu* formation because of obstruction in the *Rasavahastotasa*. This ultimately leads to increased catabolism and decreased anabolism.

***Clinical features of Balshosha***<sup>[4]</sup>

- 1) *Arochaka* (child develops loss of appetite and desire towards food)
- 2) *Pratishayaya- Jwara- Kasa* (due to depletion of body immunity and children become prone to recurrent infection)
- 3) *Kumara shushyati* (Emaciation due to loss of fat & fails to weight gain)
- 4) *Snigdha-Shukla-mukha aadee* (due to inadequate proteins oedema develops over face and orbital cavity giving glistering look and also pallor due to accompanying anaemia)

**Protein energy malnutrition**

WHO defines PEM as range of pathological condition arising from coincidental lack in varying proportion of protein and calories. Moderate to severe malnutrition is associated with one of the classical syndromes- Marasmus, Kwashiorkor, Marasmic-kwashiorkor.

**Marasmus** – it is characterised by marked wasting of fat and muscle as these are consumed to make energy. The main sign is severe wasting the child appears very thin and has no fat. There is severe wasting of shoulder, buttocks and thighs. The loss of buccal pad of fat create the aged or wrinkled appearances that have been referred to as Monkey face. Baggy pants appearances refer to lose of skin of the buttocks hanging down. Axillary pad of fat may also be diminished, affected children may alert to in spite of their condition. There is no oedema.<sup>[5]</sup>

**Kwashiorkor**- it is usually affecting children aged 1-4year. The main sign is pitting oedema, the child may have a fat sugar baby appearance. Oedema ranges from mild to gross and may represent up to 5-20% of body wt. muscle wasting always present and child unable to stand or walk. The skin lesion consists of increased pigmentation, desquamation and dyspigmentation may confluent resembling flaky paint or in individuals enamel spots. Petechia may be seen over abdomen, smooth tongue, cheilosis and angular stomatitis, herpes simplex stomatitis also be seen in Kwashiorkor.<sup>[6]</sup>

**Marasmic - Kwashiorkor**- it is mixed form of PEM and manifest as oedema occurring in children who may or may not have other sign of kwashiorkor and have varied manifestation of marasmus.<sup>[7]</sup>

In different Samhitas of Ayurveda following diseases are described that is nrelated to malnutrition.

#### ***Balshosha & Kshiraja phakka***

*Balshosha & Kshiraja phakka* are nutritional definition disorder mentioned by two different authors. The cause of *Balshosha* is explained earlier. In the *Kshiraja phakka*, wet nurse having breast milk vitiated by *Kapha* is known as having *phakka* causing milk.<sup>[8]</sup>

#### ***Parigharbhika/ Garbhaja phakka***

Child on feeding breast milk of pregnant mother which has *Alpa-poshkansha* (poor nutrient) leads to *Parigarbhika*.<sup>[9]</sup> *Garbhaja phakka* has condition present with child whose mother has become pregnant due to early cessation breast milk. Child becomes emaciated or even dies, this marasmus is due to effect of embryo/fetus.<sup>[10]</sup> This seems to be the severe form of malnutrition.

#### ***Vyadhija Sambhavaja Phakka***

*Vyadhija phakka* is malnutrition condition resultant of chronic diseases. On the whole *Vyadhija phakka* refers to severe form of malnutrition, child suffer from fever, endogenous and exogenous disease etc.<sup>[11]</sup>

#### ***Shushka Revati***

*Shushka reveti* are *graha* affecting the child represent the infection spectrum of disease resulting *Sarwangkshaya* (emaciation). Child becomes emaciated even through consuming food of many kinds suffer from severe thirst.<sup>[12]</sup>

### Management of *Balshosha*

In *Balshosha*, the basic etiopathogenesis is *Agnimandya*. By all causative factor *Kapha dosha* abnormally increase in the body which leads to *Agnimandya* and *Ama* formation which further blocks the *Rasavahastrotsa*. In which, normal physiology gets disturbed due to above causative factors. So, the treatment of *Balshosh* is divided into 2 parts – first is to correct the *Agni* means *Agnideepana chikitsa* and second is *Bruhan chikitsa*. *Agnideepana chikitsa*, corrects the disturbed physiology by drugs having *Ushna-Tikshana- guna- veerya* drugs which normalises disturbed physiology and thereafter *Bruhan* and *balya chikitsa* by medicated *Ghrita* like *Madhuyashtadhi ghrita*, *Mahapaishachika ghrita* etc & some *pushtikara yogas* can be planned.<sup>[13]</sup>

### Diagnostic criteria<sup>[14]</sup>

IAP classification of Malnutrition: This classification is based on weight for age values.

#### Weight for age (%) Grade

100-80% - Normal nutritional status

79-70% - Grade 1, mild malnutrition

69-60% - Grade 2, moderate malnutrition

59-50% - Grade 3, severe malnutrition

≤50% - Grade 4, very severe malnutrition

Weight for age is an indicator of total malnutrition /underweight.

Weight for age (%) =  $\frac{\text{actual weight of child (kg)} \times 100}{\text{Expected weight of child for that age}}$

Height for age(%)=  $\frac{\text{actual height of child (cm)} \times 100}{\text{Expected height of child for that age}}$

BMI

Head circumference

Chest circumference

Mid upper arm circumference

### DISCUSSION

*Balshosha* is a nutritional disorder described by Acharya *Vagbhata* and is related to malnutrition. In Ayurveda various conditions of malnutrition are described like *Balshosh*, *Karshya*, *Phakka* etc. These all are related with protein- energy- malnutrition. The main cause of *Balshosh* is *Agnimandya*. In *Balshosha*, due to *Agnimandya* the normal physiology gets

disturbed in children. If we prescribe *balya* and *bruhan chikitsa* without restoring *agni* success in the management is unlikely. There is need to be correct *Agni* first by *ushna-tikshna-veerya* drugs. And once the *Agni* is restored then *bruhan* and *Balya* treatment can be given. Planned and Proper diet is very crucial in preventing as well as in management of malnutrition.

Acharya Kashyapa considers *Aahara* as *Mahabhaishjya* - the greatest medicine. *Aahara-vidhi-visheshtayana* are well explained by Acharya Charaka in *Vimana* sthana. Amongst these *Rashi-Upyogasamstha-Upyokta* if not given proper concern and not followed properly may result in to *agnimandya* and in turn into *balshosha*. Since many years, malnutrition is one of major problem in India. If we manage malnutrition with the concepts of *agni deepana* and *Aahara-vidhi-visheshtayana* then it will definitely help in better outcome.

## CONCLUSION

*Aahara* is the one of the *Trayostambha* and Acharya Kashyapa also signifies the importance of *aahara* the *Mahabhaishajya* in daily life. *Balshosha* is nutritional disorder IN paediatric age group and it is related to improper or inadequate intake of food. *Balshosha* is treated by *Agnideepana* & *Balya chikitsa* along with planned diet. The diet should be is given in proper way to child with the concept of *Ashta-Aahara-vidhi- visheshtayana*. The role of *Rashi-Upyogasamstha- Upyokta of Aahara vidhi visheshtayana* is important in malnourished child. Now a days these rules are not followed properly, eating habits of junk and fast food which leads to *Agnimandya* and in turn may result in malnourishment. The *Rashi* is the quantity of food the effect of right and wrong quantity of food is crucial, it means that child should have diet according to his digestive power (*Agni*). *Upyogsamstha* is dietetic rule which is related to how, what and when to eat and it may vary child to child as per *satmya*. *Upyokta* is food consumer which play vital role towards achieving health benefits of consumed food. *Aahara vidhi visheshtayana* prevent obstruction of channels thus enhance nutritional supply. If due importance is not given towards these small rules and these are not followed then it leads to in *Agnimandya* and ultimately to *Balshosh* in child.

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