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**Review Article** 

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# NUTRITIONAL DEFICIENCY DISORDERS IN BALYAVASTHA ACCORDING TO AYURVEDA

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### **ABSTRACT**

Ayurveda, the age old science of longevity has its own unique approach in dealing with childhood nutritional disorders. The signs and symptoms of karshya mentioned in Ayurveda (wasted muscles over buttocks, abdomen and neck, prominent veins, bony prominences, loose skin folds, etc.) has close proximity with the signs and symptoms of undernourished children. The cause of karshya is explained as the excess intake of dry food items (biscuits, rusks, namkeen, bread etc.), less intake of food, fasting, psychological causes like anger, fear, grief etc. Malnutrition generally refers both to under nutrition and over nutrition diseases. Nutritional deficiency disorders are described in various Ayurvedic texts which can be correlated with Apatarpanajanya Vyadhis. Various Acharya of Ayurveda described diseases such as Phakka, Parigarbhika, Balashosha, Karshya etc in different Samhitas

can also correlated to nutritional deficiency disorders. A critical review of these disorders provides different aspects of malnutrition and proper understanding of pathogenesis in terms of Dosha - Dushya which will give a valuable key for their effective management. This paper highlights the Ayurvedic review of nutritional deficiency related disorders in children.

**KEYWORDS:** Ayurveda, Malnutrition, karshya, Vyadhis, Phakka, Parigarbhika, Balashosha, Karshya.

## INTRODUCTION

India is one of the highest ranking countries of the world for the number of children suffering from malnutrition. In 2015, Global Hunger Index report ranked India 20th in world and third amongst South Asian nations. Nutritional disorders comprise of both undernutrition and overnutrition. Undernutrition or malnutrition can be caused by an insufficient intake of food or of particular nutrients or by an inability of body to absorb or assimilate these nutrients. On the other hand overnutrition is caused by overconsumption of food. The former is referred as 'Aptarpanjanya Vyadhi' and the latter as 'Santarpanjanya Vyadhi' in ayurveda. Nutritional disorders can be particularly serious in children, since they interfere with growth and development and may predispose to many health problems such as infection and chronic diseases. Nutrition deficiency interferes with growth (both physical and mental) and development may predispose to many health problems such as infections and chronic diseases and can be particularly serious in children and delay to recovering from diseases. Ayurveda describes malnutrition under Apatarpanjanya Vyadhis.<sup>[1]</sup> Based on severity and aetiology these disorders may be considered as Karshya, Phakka, Parigarbhika and Balashosha. Aahara (Food) is one of the Trayopsthambha of life as per Ayurvedic classics. [2] Indian traditional system of medicine has assimilated various explanations regarding this vital pillar of life. The transforming unit from 'food' into nutrition is termed as 'Agni' or digestive fire, which forms the edifice upon which the Ayurvedic system of medicine is built.<sup>[3]</sup> According to Acharya Charaka over thin (Atikrushya) persons are described under eight despicable persons i.e. Ashtau-ninditiya Purusha. [4]

**APTARPANJANYA VYADHI (MALNUTRITION IN CHILDREN):** The following diseases can be categorized as malnutrition disorders in children.

**KARSHYA**: It is the condition of excessive emaciation.

**Etiology:** Excessive emaciation is caused by the intake of diet devoid of any fat, excess fasting, intake of food in inadequate quantity, over administration of sanshodhan treatment or Panchkarma procedures, grief, suppression of natural urges including urge for sleep, repeated baths, hereditary factors, old age, chronic illness and stress.<sup>[5]</sup>

Clinical features: Buttocks, abdomen and neck of a karshya patient are emaciated; a vascular network is visible on skin with prominent joints. Person appears to have skin and bones only. An excessively emaciated person cannot tolerate physical exercise, intake of food in large

quantity, hunger, thirst, diseases and drugs. They also cannot stand excessive cold and heat. Such emaciated persons often suffer from splenic diseases, cough, wasting, dyspnea, gulma (abdominal tumor), piles, abdominal diseases and malabsorption diseases.<sup>[6]</sup>

Principle of treatment: Light and nourishing diet is prescribed for the nourishment of the Karshya patients. [7] In case of an emaciated person, light and nourishing diet (like old shali rice) should be given so as to bring about proper nourishment in them. Such diets being light, serve as stimulants of digestive power and bring about nourishment due to their nutritive property. Sleep, joy, comfortable bed, contentment, tranquility of mind, abstinence from anxiety and physical exercise, pleasant sights, intake of freshly harvested rice,, fresh wine, meat soup of domestic, marshy and aquatic animals, well prepared meat, curd, ghee, milk sugarcane, shali rice, Phaseolus radiates, wheat, sweet preparations, enema consisting of unctuous and sweet herbs, regular oil massage, use of scents and garlands, use of white apparel, elimination of doshas in time and administration of rejuvenating and Brinhana (nutritive) drugs remove emaciation and bring out nourishment in the body. [8]

**BALSHOSHA**: This disease of children is described by Acharya Vagbhatta. <sup>[9]</sup> Indulgence in excessive sleep, intake of cold water and breast milk vitiated by kapha cause an imbalance in doshas and increase in Kapha in baby. This Kapha causes obstruction in Rasavaha srotas of child, which are the channels for nutrition, thus causing undernutrition. The undernourished child suffers from lack of appetite, recurrent respiratory infections, cough, fever, emaciation of muscles and paleness of face and eyes. To combat Balshosha, snehapana, use of anabolic herbs and preparations along with appetizers is recommended. Concurrently efforts are made to clear the obstructed channels and to purify the vitiated milk in the mother.

PHAKKA: The word 'Phak' indicates the slow movements or creeping like a snail or failure of the skill of locomotion even after attaining age of one year. So when the child becomes crippled with wasting of body, apathy and slow movements, he is said to be suffering from Phakka roga. Acharya Kashyap<sup>[10]</sup> has described three types of phakka namely, Ksheeraj, Garbhaj and Vyadhij Phakka. Ksheeraj Phakka is similar to Bal Shosha and is caused by milk vitiated by Kapha dosha. Garbhaj phakka is caused when a mother whose baby is still exclusive breastfeeding conceives again which results in decreased quantity and quality of mother's milk. Vyadhij Phakka is caused by chronic illnesses and unhygienic conditions. It manifests as severe form of malnutrition with clinical features such as wasting of buttocks, thighs and upper limbs, pot belly, big head appearance, inability to walk etc. The treatment

depends on the cause. In case of milk impurity, the mother should be treated. In case of chronic diseases, attention should be given to treatment of such diseases. The treatment of Phakka includes snehana with Kalyanaka ghrita followed by shodhana. Administration of drugs having property of activating the neuromuscular response like raasna, punarnava etc. along with Samvardhana ghrita is done. Nutritious diet must be prescribed like ghee, soups and mamsa rasa. Abhyanga with Raj Taila is advised to improve muscle tone. Rehabilitative measures like Tripad chakra ratha (Tricycle) are also advised to help child regain his locomotive ability.

PARIGARBHIKA: [11] It is described by Astanga Sangraha which states that when a baby feeds on milk of a pregnant mother or there is an abrupt stoppage of breast milk to baby due to pregnancy of mother, the baby suffers from Parigarbhika. It manifests as respiratory illnesses, loss of appetite, vomiting, lethargy, abdominal distension. The treatment of Parigarbhika should be aimed at bringing the Agni to normalcy (correction of digestion and appetite). This is achieved by small doses of ghrita made of carminatives and digestive agents. Various Lehya preparations, Jeevaniya herbs and milk are also prescribed. SUSHKA REVATI Bal Graha are a group of diseases of children which are caused by unidentified factors and carry a high mortality and morbidity rate. Sushka Revati is one of them and manifests as progressive emaciation of all body parts, diarrhea, anorexia, skin changes, abdominal nodular swellings and geographic tongue. [12] General line of management includes personal hygiene measures anointment, bath and fumigation, isolation and disinfection of surroundings. Various drugs like swarna basantmalti, shilajatvadi lauha, shringa bhasma, vardhaman pippali and medicated ghrita are advocated.

# **DISCUSSION AND CONCLUSION**

Nutritional deficiency disorders being one of the major health problems in the world. Deficiency in nutrition inflicts long term damage and malnourished children are more prone to infectious diseases. Ayurveda has precisely described the aetiology, clinical features and treatment of malnutrition. Bal Shosha correlates well with caloric malnutrition and gives the child a marasmic appearance with white puffy and slimy face. On the other hand, Parigarbhika represents protein malnutrition (Kwashiorkar). It refers to the disregarded child consequent to the pregnancy. Karshya is a state of wasting (low weight for height) and stunting (low height for age) due to chronic malnutrition. Among three types of Phakka, Ksheeraj Phakka and Garbhaj Phakka have etiology and manifestations similar to Bal Shosha

and Parigarbhika respectively. Vyadhija Phakka may be understood as protein energy malnutrion due to low intake of nutrients, chronic illness and malabsorption. This adversely affects the child development resulting in delayed milestones.

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