Review Article

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NUTRITIONAL DEFICIENCY DISORDERS IN PAEDIATRICS: AN AYURVEDIC PERSPECTIVE

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ABSTRACT

Nutrition is major concern for the mankind. Food determines body condition right from the womb to tomb; it is main source of energy. Abnormal nutrition may cause both over and under nutrition hazards. It causes more than half of the nearly 11 million deaths each year among children under age five. Nutritional deficiency disorders are viewed under Apatarpanajanya vyadhis. Ancient Acharyas explained diseases related to nutritional deficiency such as Phakka, Parigarbhika, Bala shosha etc in different samhitas. This paper highlights Ayurvedic perspective of nutritional deficiency related disorders.

Keywords: Apatarpanajanya vyadhis, nutritional deficiency disorders, phakka, pargarbhika, bala shosha, Shushka revati.

INTRODUCTION

Nutrition is major concern of the mankind. Abnormal nutrition causes over or under nutrition hazards among them nutrition deficiency disorder is one. Nutrition deficiency is such a condition where children fail to maintain natural body capacities such as growth, resisting power to infections as well as recovering from disease, learning and physical activities. As per WHO poor feeding of infants and young children resulting in under nutrition is; "The single most important risk factor for diseases". It has a role in more than half of the nearly 11 million deaths in each year among children under five.¹ Nutritional deficiency disorders are viewed under Apatarpanajanya vyadhis. Based on severity and aetiology they may be considered as Karshya, Phakka, Parigarbhika and Balashosha.

Nidana (Etiology)

The etiological factors of Nutritional deficiency disorders can be broadly classified under 3 separate headings.

Aharaja: Qualitative: Ruksha Annapana (food which causes dryness), Alpa Bhojana (inadequate food) and excessive intake of Kashaya (Astringent), Katu (spicy) and Tikta (Bitter) Rasa.

Quantitative: Alpashana (Less food intake), Pramitashana (intake of nutritionally deficient food), Anashana (absolute no food intake), Langhana (Fasting).

Viharaja: Shararika: Kriya atiyoga (Excessive purification therapies), Ativyayam (excessive exercise), Malamutradi nigrha (Suppression of natural urges), Atiadyayana (excessive learning), Vata sevana (excessive exposure to wind), Atapa sevana (Excessive exposure to sunlight), Atibhargamana (Child labour).²⁻⁴

Manasika: Ati chinta (worry), Ati krodha (anger), Ati bhaya (fear).

Others: Anatha (Orphans), Krimi (Worm infestation), Grahani (Inflammatory Bowel disease), Visuchika (Infective Diarrhoea), Ksheeralasaka (lactose intolerance / milk protein allergy), Vatika prakriti (Body constitution), Chirakalina vyadhi (Chronic debilitating disease) and not Following of food regimen.⁵

Samprapti

Karshya and Underweight

Karshya is under nutrition condition resulting from less intake⁶, Vatadushta stanya⁷ or secondary to debilitating disorder where child becomes undernourished.

Balshosha and Kshiraj Phakka (Marasmic Kwashiorkor)

Balshosha⁸ and Ksheeraj phakka⁹ are nutritional deficiency disorders mentioned by two different authors. The causes of Balshosha are Shlaishmika anna sevana (Excessive energy dense food), Shitambu (cold liquid items) and diva swapna (excessive day sleep) done over period leads impairment of Agni further leading clinical features of Arochaka (reduced digestive capacity), Pratishyaya (Running nose), Jwara (fever) and Kasa (Cough)¹⁰, these conditions if not detected early may lead to Shosha (Emaciation) Marasmic Kwashiorkor. In Ksheeraj phakka intake of Shlaishmika dughdha leads to Agni dushti results in Bahuvyadi (Infectious disease) and Kshaya (Failure to thrive).

Parigarbhika / Garbhaja Phakka (Kwashiorkor)

Abrupt stoppage of breast milk or child on feeding breast milk of pregnant women which has Alpa poshakansha (poor nutrients) leads to parigarbhika / Garbhaja Phakka condition presents with Kasa (cough), Agnisada (impaired digestive fire), Vamathu (vomiting), Tandra (stupor), Jwara (fever), Aruchi (anorexia) and Koshta vrudhhi (pot belly).¹⁰

Vyadhi Sambhavaja Phakka (Diseases Leading To Karshya)

Vyadhija Phakka¹¹ is malnutrition condition resultant of chronic diseases like Prameha, Grahani, Graha roga etc. On the whole Vyadhija phakka refers to severe forms of malnutrition. Shuhka sphik (wasting of buttocks), Shushka bahu (wasting of Upper limbs), Shushka uru (wasting of thighs), Mahodara (Pot belly), Mahoshiro (head appears big) due to relatively wasting in body parts, Nischeshta adho kaya (inability to walk) etc. represents grades of Marasmus.¹² Prameha being spectrum of metabolic disorders where Dhatu sara (essential nutrients) is lost. As it happens in Glycosuria, Phenyl-ketone-urea, Albumin-urea thus child develops specific deficiency leads to life threatening condition if not managed properly. Similarly diseases due to Grahani vikara's, Graha dushti (debilitating infections) shall also land up in nutritional deficiency disorders.

Shuska Revati

Shushka revati one of Graha (Demon) affecting the child represents infectious spectrum of diseases resulting Sarvanga kshaya (Emaciation). In this child though fed with enough quantity of high quality food ends up in malnutrition. When it becomes chronic child presents with Anna dwesha (aversion to food), Vivarnata (loss of lustre) Nanavidha shakrita (variegated colour stools), Udara granthi (abdominal nodular swellings), Jihvayanimnata (geographic tongue). Child shows progressive emaciation at the outset the clinical condition which can be correlated with abdominal tuberculosis.¹³

Upadrava (Complications)

Grahani is due to Agnimandya, Swasa and Kasa (Recurrent Respiratory tract infections), Kshaya (PEM), Functional tumour, anal fissure, Ascites, Inflammatory bowel disease and Splenomegaly.

Principles of Management

Etiological factors should be avoided because this Nidana Parivarjana¹⁴ has two fold benefits. Being a prophylactic measure, further progression of disease can be halted. The other aspect is in future relapse of the same disease can be prevented. Proper application of Samshodhana (Purification therapy), Samshamana (Conservative therapy), Diet and lifestyle are helpful in preventing, controlling as well as eradicating the condition.

Chikitsa

With above said perspectives we can conclude that nutritional disorders are either due to Agnimandya and Dhatukshaya. Hence principles of treatment shall be on the lines of Agnidipana, Brimhana, Dhatusara vardhana. If complicated with features like inability to walk, speech, Irritability and others, respective treatment should be adopted with mild purification measures to enhance the quality of absorption and assimilation. For this Haritaki churna (powder form of fruits of *Terminalia chebula*), Trivruttha kshira (roots of *Operculina turpethum* boiled in milk), Draksha rasa (*Vitis vinifera* fruit juice) can be used judiciously. Further one can use Rajanyadi churna¹⁵, Aravindasava¹⁶, Kushmanda avaleha¹⁷, Pippalyadi Ghrita¹⁸, Brihat Chagaladi ghrita¹⁹, Amritaprasha ghrita²⁰, Kalyanaka ghrita²¹, Chyavanaprsha²² for Dhatu sara vardhana. Therapies like mild Udavartana (dry powder massage), Abhyanga (oil massage), Shastika shali pinda sweda (sudation therapy with bolus of cooked rice), Basti (medicated enema), Shirodhara (procedure of slowly and steadily dripping medicated oil or other liquids on the forehead) to stimulate child and to rehabilitate. Care should be taken to avoid factors which can predispose for nutritional deficiency disorders.

Pathya

Daily diet should include all components of diet; protein, fat, carbohydrates and minerals.²³ Vihara includes various preventive as well as rehabilitative measures. Effective for both mind and body like Music therapy, Peace of mind, playful activities, active and passive physical exercise.²⁴

CONCLUSION

Nutritional deficiency disorders are described in scattered manner in Ayurvedic text. A systematic study of these conditions provide insight in to hazards of nutritional deficiency and represents different aspects of Nutritional deficiency disorders and proper understanding of pathogenesis of the conditions provides valuable key for the effective management.

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