



AYURVEDA PERSPECTIVE OF UNDERNUTRITION IN CHILDREN & ITS MANAGEMENT: A SYSTEMIC REVIEW

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ABSTRACT

Karshya (Underweight) is one of the common problems in Indian preschool children & 43% Indian preschool children are underweight. One of important factor for *Karshya* is *Hina Matra Ahara* (inadequate quantity of food). About 75- 80% of Hospitalized children suffer from some degree or type of malnutrition. Lots of attempt have been made to minimize this at National level. Mid-day meal program to school going children alone will not be sufficient.so Aim of study is to review on management of *Karshya*. **Material and Methods** - Literary review was conducted with help of several important *Ayurvedic* and Modern textbooks, Research papers, Research Article, Journals to collect information on *Karshya*. The description of *Karshya* clearly correlates with under nutrition. **Conclusion:** Ayurveda can play major role in providing health to children. In *Ayurveds*, *Balya* an *Bruhana Chikista* for undernourished children is an interesting area in the field of *Kaumarbhritya*. Since we try to review of article on management of *Karshya*.

Keywords: *Karshya*, *malnutrition*, *Ayurveda*

INTRODUCTION

Karshya is one of the common problems in children. *Karshya* is an *Aptarpanjanya* ^[1] *vyadhi*. It is a disease in which the body get emaciated, gradually. According to *Charak Karshya* is described under eight despicable per so (*AstauNinditiya Purush*) ^[2]. [Food (*Aahara*) is one of the three sub-pillars of life as per *Ayurveda*. *Karshya* has been categorized under nutritional deficiency. The clinical presentation of *Karshya* is described in text in presence of *Shuksha Shroni*, *Udar n Greeva*, *Dhamanijala Santataha* reduce muscle, *Twakasathi Shisha*, *prominence of joint*, *Sthoolparva* Altered function of *Vayu* and *Agni* leads to insufficient production of *Rasa Dhatu*. *Uposohan* of *Rasa Dhatu* takes place leading to *Dhatukshaya* chronologically. Hence the patient of *Karshya* suffers from indigestion, malabsorption and defective metabolism. *Meda* and *Mamsadhatukshaya* at microscopical level, ultimately express its symptoms macroscopically. These sequences are very much correlated to under nutrition. Under nutrition is a condition in which there is inadequate consumption, poor absorption or excessive loss of nutrients ^[3]. The term malnutrition refers to both under nutrition as well as over nutrition. Childhood under nutrition is an underlying cause as an estimated 35% of all death among under 5 and 21% of total global disability ^[4]. It hampers the immunity and make the child susceptible to various infections.

Definition of *Karshya*-

Karshya: It is under nutrition condition due to reduce food intake of baby resulting from less intake, if mother use *Vata vardhak Ahar-Vihar* and baby take *Vata Dushit Stanya*, 8-9 ultimately babies become malnourished. According to *Ayurvedic* texts the *Alpashana* (reduced intake of food) and *Vishamashana* (false habit of intake) are two important predisposing factors which play a major role in pathogenesis of *karshya* disease.

Pathophysiology of *Karshya*-

Etiology & impact of malnutrition: In *Ayurveda* *Karshya* is *Apatarpana Janya Vyadhi* and etiological factors are described below as fallow.

Ahar janya factor ^[5]

Kashaya ras atisevan

Langhana (Fasting)

Promitasan(Littlediet)

Vatala ahara (food which initiate vata) Krodha (Anger Rukshaannapan (Indulgence of rough food n drink)

Vihar janya factors:

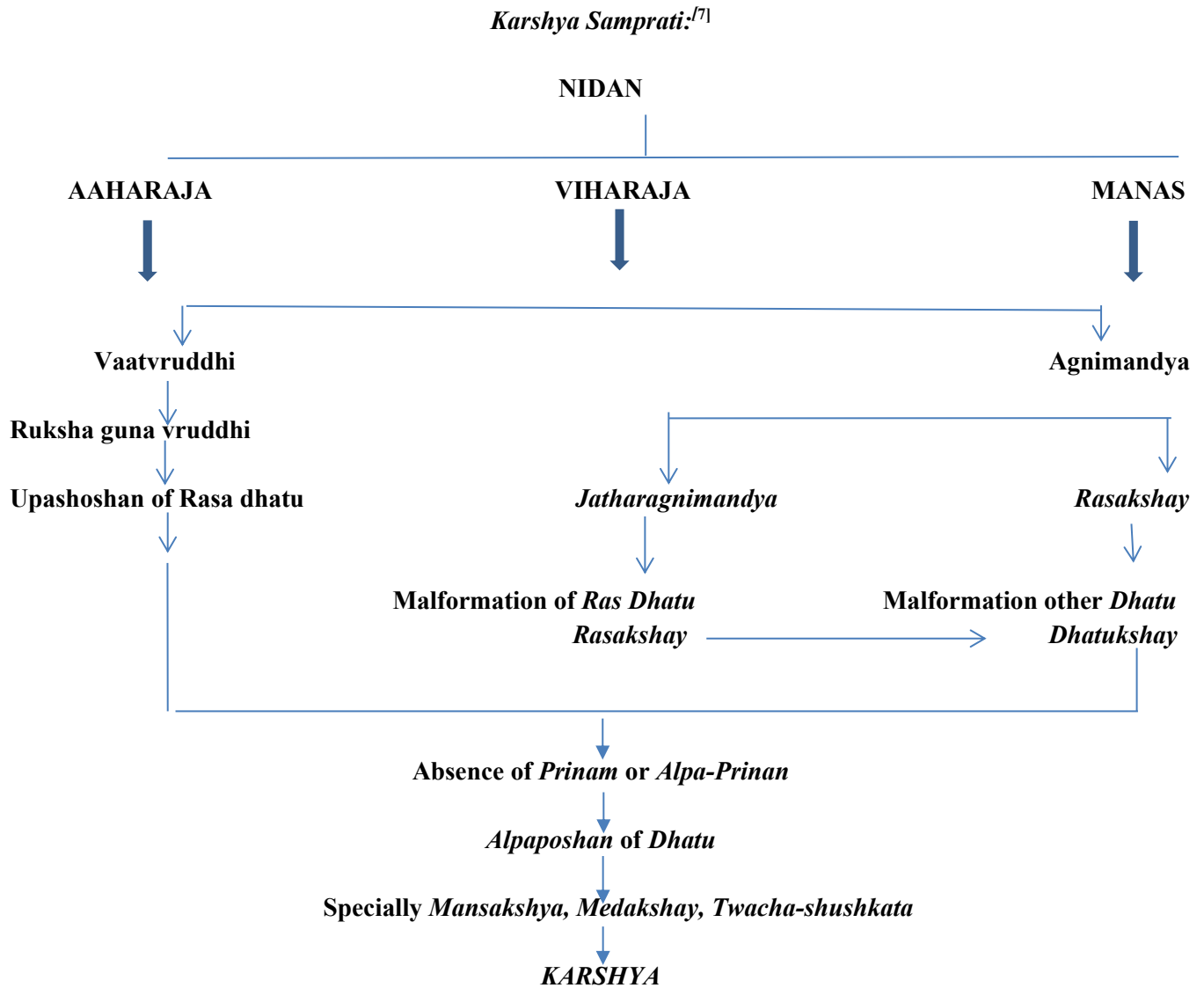
Atisanabhayas(indulgence in bath), *Ati Vyayama (Excessive Exercise)*, *Dhyana(Meditation)*, *Nidra Nigraha(Suppression of natural urges such as sleep)*, *Kshuda Nigraha (Suppression of natural urges such hunger)*, *Pipasa Nigraha (Suppression of natural urges such thirst)*. According to *Acharya Charaka* over lean (*Atikrushya*) persons are described under eight despicable persons (*Ashtau-ninditiya Purusha*) along with over obese (*Medasvi*) person.

Signs and symptoms of *karshya*:

Achariya Charaka has been described the lean person has *Shushka-Sphic*, *Udar*, *Greeva* (Dried up buttocks, abdomen, neck), *Dhamanijala Santataha* (Prominent vascular network) *Twagasthi Shesh*, *Ati krusha* (Remnant of skin and bone), *Sthoola parva* (Thick joints), *Vyayam Atisauhityam* (The over lean does not tolerate physical exercise, over saturation), *Kshutpipasamay-aushadham* (dose not tolerate high in toxicity of hunger, thirst, disease, drugs), *Ati-shitoshna-maithunam* (Too much of cold, heat and sexual intercourse).^[6]

Samprapti: *Karshya* is the disease correlated with under nutrition. It is an *Apatarpana Janya Vyadhi* (disease caused due to under nourishment) where *Vata Dosha* (bio-humor) plays an important role in the pathogenesis,

Samprapti Ghatak: *Dosa- Vata*, *Dushya - Rasa dhatu*, *Agni- Mandagni*, *Ama- formation of Ama due to Agnimandya*, *Srotas affected -Rasa vaha,Raktavaha, Medavaha, Mamsavaha*, Type of *Srotodusti -Sanga, Rogmarga- Abhyantarrogamarga*, *Vyaktasthan - Sphiga, Udar, Greeva, Twak, Asthi, Vyadhiprakar - Chirakari. Sadhyasadhyatwa - Kricchasa*



Complication of Karshya; Acharya Charka has been described many complications of Karshya they are: The lean person becomes a victim of *Pleeha, Kas, Kshaya, Swas, Gulma, Arsha, Udar, Grahani*.^[8]

Failure to thrive (FTT) - Failure to thrive usually refers to weight below 3rd or 5th centile. The degree of Failure to thrive (FTT) is usually measured by calculating weight, height and weight-for-height as percentage of the median value for based on appropriate growth chart.

Protein Energy Malnutrition (PEM): PEM is a range of pathological condition arising from inadequate proportion of protein and calories, occurring most frequent in infants and young children,

IAP classification of malnutrition: This classification is based on weight for age values.²³

Grade of malnutrition Weight-for-age of standard (%):

Normal > 80

Grade 1, 71-80 (mild malnutrition)

Grade 2, 61-70 (moderate malnutrition)

Grade 3, 51-60 (severe malnutrition)

Grade 4, < 50 (very severe malnutrition)

Moderate to severe malnutrition is associated with one of the classical syndromes, namely, Marasmus, Kwashiorkor, and Marasmic-Kwashiorkor.

Chikista Sutra and Management

1. *Laghu Dravya Santarpan Chikitsa* that means light and nourishing diet should be administered in *Karshya Rogi*^[9]
2. In chronic state of *Karshya* the refreshing therapy should be administered slowly depending upon the physical constitution, power of digestion, *Doshas* vitiated, nature of therapy, dose, season and time of administration.
3. Avoidance of etiological factors because this *Nidana Parivarjana*.^[10]
4. *Samshodhana* (Purification therapy), *Samshamana Chiikitsa* (Conservative therapy), along with diet and lifestyle are helpful in preventing controlling as well as eradication of the *Karshya*.
5. It is an *Agnimandya* disorders so principles of treatment shall be on the lines of *Agnidipana*, *Brimhana*, *Dhatusara vardhana*.
6. *Acharya Charka* has been described the line of treatment of *Karshya* through diet management e.g. Light and nourishing diet is prescribed for the nourishment of the *Karshya* patients. Such diets being light serve as stimulants of digestive power and bring about nourishment due to their nutritive property as well as prevent of emaciation and nourish to the child.^[11]
7. Absorption and digestion of food items mainly depend on liver function and in some case of malnutrition liver functions reduced, so in such condition liver function boosting medicine play a major role for increase appetite and absorption some examples of liver boosting herbs such
8. **Brumhana therapy:** In case of malnutrition *Brumhana* therapy may be more effectively because *Karshya* is an *Apatarpana Janya Vyadhi* and *Brumhana Dravya* promotes healthy growth of *Dhatus*, particularly *Kapha* (type of bio humor), *Mamas* (muscles) and *Meda* (fat) leading to proper development and enhancement of different body parts.
9. **Samshodhan therapy:** According to *Ayurvedic* texts *Vata Dosha* being a prime responsible factor along with *Agni* in the pathogenesis of *Karshya*

disease, So *Basti Karma* is choice of *Panchkarma* procedures in malnourished children.

10. **Immune therapies:** Malnourished children more prone to infection due to poor immune function, most common site of infection is the skin, the alimentary tract, the respiratory tract and the urinary tract
11. **Swarna Prasana:** It is a type of *Samskara* which play a major role to modulate the immunity and improve quality of life. One pharmaco-clinical study, done on the *Madhu Ghrita-Swarna-Vacha* combination given to neonates showed a significant effect of humeral antibody formation and it acted on immunological system, which was evident by triggering the response of immunological system arise in the total protein and serum IgG level.
12. **Rasayana therapy:** *Rasayana* therapy also immune booster due to proper uptake, growth and improvement of essential *Saptadhatus* (seven vital tissues).^[12]

Panchakarma Therapy (Purification)

In *Karshya* (under nutrition) prominent *Dosha* is *Vata*. So *Basti* is the best therapy to win over the *Vata Dosha*. Combination of *Kshira Paka* and *Kshira Basti* therapy in *Karshya* is better than individual therapy.

DISCUSSION

In *Charak Samhita*, *Sutrasthan lakshan*, *Nidan*, *Chikista* of *karshya* is described in a view of nutritional deficiency. *Sushruta* has also considered *Karshya* as a clinical state of under nutrition. *Samprati* of *karshya* described in *Sushrut Sutrasthan*. *Ashtang Hridaya Sutrasthan Karshya* has described in *Kshudhavegadharan Janya Vyadhi*.^[13] *Kashyap Samhita Karshya* is included in *Vataja Roga*. In treatment schedule *Brimhan* therapy is highlighted.^[14] *Karshya* in *Madhav Nidan* is described on *Roga Lakshana* rather than individual *Roga*.^[15] *Sarangadhar* has included *Karshya* in *Nanatmaja Vatavyadhi*.^[16] In *BhavPrakash Karshya* has described as a separate chapter The *Nidan*, *Lakshana*, *Samprapti*, *Chikitsa* all are explained.^[17] In *Yogaratanakar Karshyaroga* is mentioned in the *Medoroganidan*.^[18] Some previous

scientific work was carried out on topic of Karshya. They are shown below. In the year 2017 from this period Dec –Jan some a clinical study of **Vidarikand churna** was done, Total 28 patients were taken. It shows better results in Subjective Parameter and also increases Weight, BMI, Height, Mid Arm Circumference. 16 patients were markedly Improved and 12 shows improvement.^[19] In the year 2018 in period Jan –Feb A clinical study of **kshirtaila basti** was done Total 20 patient was taken I show 40 % show moderate improvement and 30% show mild improvement by onle 3% patient show mark improvement with no improvement in rest of 3% patient.^[20] In the year Mar - Apr 2016 A clinical study of **Ashwagandha Ghruta** was done Total 20 patient was taken In Objective parameters, weight gain and BMI were found to be statistically significant. The subjective parameters in study group like *Nidra*, *Kshuda* and measures of morbidity are statistically significant.^[21] In the year 2020 A clinical study of **Goghruta** was done in June –July. Total 30 patient was taken *Goghruta* show *Balya* effect on *karshya* patient.^[22] In the year 2018 a clinical study on *Ashwagandha Ghruta* *Snehapana* and *Matra basti* in *karshya* was done .Total 30 patient was taken, whereas *Matrabasti* is found very effective.^[23]

CONCLUSION

Karshya is a disease caused by nutritional deficiencies in which the body gets emaciated gradually. Mainly the gluteal region, abdomen and neck show gross bulk muscle loss and subcutaneous fat depletion. This condition is very much similar with under nutrition.

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