



THE COMPREHENSIVE REVIEW ARTICLE ON KARSHYA (AYURVEDIC NUTRITIONAL DISORDERS) W.S.R. To MALNUTRITION

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ABSTRACT-

Prevention is prioritized over cure in Ayurveda. Many common health issues can be avoided with a balanced diet and appropriate dietetic guidelines. Food is the foundation of life for all living things; it fosters development, strength, wisdom, and contentment. Food is a vital source of nutrients and has therapeutic significance. It also helps people rebuild strength that has been lost as a result of the negative effects of the disease during the post-treatment phase, as well as from excessive exercise or addiction. Nutritional problems are haphazardly explained by Ayurvedic classics. Every illness results from flawed Ahara and Vihara. In order to maximize the advantages of the food that is consumed, ahara vidhi is equally crucial. Malnutrition in childhood is estimated to be the cause of 21% of all disability-adjusted life years lost in children worldwide and 35% of all deaths in children under the age of five. Karshya is concerned with weight loss, but she also connects it to conditions that resemble starvation. Karshya is an illness in Ayurveda, along with its cause, prodromal symptoms, characteristics of other diseases, and poor prognosis indicators. In a Vataja prakriti person, Karsha is also physiological. In Ayurveda, Karshya is prevented and managed by strengthening a child's immune system through a healthy diet (food management) and the use of herbal remedies. This review article discusses the several causes of Karshya (malnutrition) in children and how Ayurveda can treat it.

KEYWORDS: Ayurveda, Karshya, Malnutrition, Immunity, Panchkarma, Rasayana.



INTRODUCTION-

Human life is significantly impacted by nutrition. Children who are malnourished are unable to sustain their bodies' natural abilities for growth, learning, and physical activity, as well as their ability to fend off infections and recover from illnesses. The WHO states that the single greatest risk factor for disease is inadequate nutrition in early children and improper feeding of newborns, which leads to malnutrition. It contributes significantly to over half of the approximately 11 million fatalities among children under the age of five that occur each year.¹ Malnutrition is viewed under *Apatarpanjanya Vyadhis*. The condition that results from consuming insufficient amounts of food over a lengthy period of time is known as undernutrition (BMI <18.5). It is hunger in severe cases (BMI <16). It happens as a result of inadequate food intake, poor absorption, excessive loss, or increased demands on the body from development, pregnancy, and cancer. Undernutrition and overnutrition are both included in the term "malnutrition." Undernutrition is sometimes used interchangeably with malnutrition and Protein-Energy Malnutrition (PEM).²

Karshya is listed as one of the eight most undesirable constitutions in *Astanindita* in the *Charak Samhita*. Karshya is both an illness and a sign of numerous other illnesses. The primary causes of Karshya are excessive activity, *Manasika Bhavas*, and malnutrition. Therefore, *Agnidushti* occurs, *Bhutagni* follows, *Dhatvagni* is affected, and all of the *Dhatus* are not properly nourished, according to *Ayurveda*. The symptoms of *Dhamanijala-darshana*, *Sushka Sphigudargriva*, etc., then appear. Therefore, managing *Pathya-apathya*, altering lifestyle, maintaining food quality and amount, etc., are crucial aspects of Karshya treatment.³ The most impacted are children who are still developing. Their state of nutrition serves as a sensitive gauge of the community's overall health and nutritional status. In contrast, malnutrition is more common in people who are pregnant, have a heavy workload, have chronic illnesses, or have had surgery.⁴

Karshya implies small, emaciated, weak, and slender. *Tanukarane dhatu*, which translates to "Alpa, Suskshma," is the root of the word Karshya. According to *Dalhanacharya*, Karshya lacks *Rupa*, *Bala*, and *Upachaya*. *Ahara* was ranked first among the *Tryopasthambha*.⁵ 'Agni', or digestive fire, is the foundation of the Ayurvedic therapeutic method. 'Food' is transformed into nutrients by this unit. Malnutrition is caused by *mandagni*. *Mandagni* causes improper digestion and malabsorption.⁵ According to *Acharya Charaka*, there are eight despicable persons (*Ashta-*



ninditiya Purusha) who are overly lean (Atikrushya) and overfat (Atisthaulya).⁶ *Karshya* comes under cause, prodrome, sign and symptoms, complication, and bad prognostic sign. *Karshya* result from chronic disease as well.

MATERIAL AND METHODS-

Ayurvedic classics including Charaka Samhita, Sushruta Samhita, Kashyap Samhita, and Ashtanga Hridaya provided the information for the *Karshya* manuscript. Astanga Sangraha, Ghai Essential Pediatrics, Kaurmarabhritya textbooks, and so on.

REVIEW IN AYURVEDA LITERATURE-

Karshya (also known as protein energy deficiency or under nutrition) is described in the Ayurvedic literature by *Ati Krishta*, *Balshosha*, *Phakka Roga* & *Parigarbhika Roga*, and *Shushka Rewati*. *Karshya* can be linked to a nutritional deficit. Additional childhood dietary deficiencies where *Karshya* manifests as an early manifestation⁷.

1. *Balshosha* - Acharya Vagbhata explains this illness. *Shosha*, or physical emaciation brought on by the loss of subcutaneous fat and tissues, will occur as the term suggests.

2. *Phakka Roga - Phakka*- According to Acharya Kashyapa, *roga* is the singular and distinct nutritional ailment, or *Kuposhana Janya Vyadhi*. This illness has not been described by any other author. This suggests that the child's overall health state will continue to deteriorate.

3. *Parigarbhika Roga* - Ayurveda explains this unique nutritional condition by emphasizing how malnutrition develops from infancy.

4. *Shushka Rewati* – Acharya Vagbhata was the only one to explain this *Graha* illness. In this condition, the child is unable to gain weight and height in accordance with age and becomes emaciated day by day, even when they frequently consume complete or balanced diet.

NIRUKTI OF KARSHYA:

कार्श्यं - “कृशस् भावः कार्श्यं” According to this, *Karshya* means a person who is lean and emaciated.⁸ A person becomes lean due to *Rukshanna pana sevana* (indulgence in rough food and drinks), *Langhana* (fasting), *Pramitashana* (limited diet), *Kriyatiyoga* (excessive subjectivity to evacuative therapy), *Shoka* (grief), *Chinta* (worries), *Bhaya* (fear), *Shrama* (excessive physical and mental activity), *Vega-Nidra-Trusha -Kshudha-nigraha* (suppression of natural urges, such as sleep, thirst, and hunger), *Atishrama*, *Ati maithuna*, *Atisnana abhyasa* (excessive exercise, sexual relations, excess bath), *Ruksha udvartan* (excessive non-unctuous anointing to the



persons), Snana abhyasa (indulgence in bath), Beeja Dosha (heredity), Jara (old age), Vikar-anushaya (continued disorder), and Krodha (anger).⁹

DEFINITIONS OF KARSHYA:

Malnutrition is characterized by low weight-for-age (underweight), length-for-age (stunting), or weight-for-length (wasting), and it encompasses both undernutrition and overnutrition.¹⁰ Among children under five, the prevalence of stunting, wasting, and underweight is 48%, 20%, and 43%, respectively.¹¹ The mild and moderate forms of undernutrition affect the majority of children (80%) and are often overlooked.¹² Malnourished children's are more prone to systemic infection because infections aggravate malnutrition by decreasing appetite, inducing catabolism, and increasing demand for nutrients.¹³

ETIOLOGICAL FACTORS (NIDANA) OF KARSHYA-

Ahar janya factors: The following elements are important in the pathophysiology of Karshya: excessive consumption of astringent (Kashya), spicy (Katu), and bitter (Tikta) Rasa, as well as Ruksha annapana (food that promotes dryness).

Vihar janya factors: Malnutrition is caused by a number of factors, including alpha bhojana (eating enough food), pramitashana (consuming food that is nutritionally inadequate), anashana (not eating at all), langhana (fasting), ativyayam (excessive exercise), malamutradi nigraha (suppressing one's natural urges), vatasevana (excessive exposure to wind), atapa sevana (excessive exposure to sunlight), atibhargamana, ati chinta (worry), ati krodha (angry), and atibhaya (fear).^{10–12} Acharya Charaka states that overly thin (Atikrushya) and obese (Medasvi) people are classified under the eight disgusting humans (Ashtau-ninditiya Purusha).¹⁴

Manasika factors:

Atichinta (worry), Atikrodha (anger), Atibhaya (fear).

Others factors:

Jirnyadhi (chronic debilitating disorders), Ksheeralasaka (lactose intolerance/milk protein allergy), Krimi (worm infestation), Visuchika (infectious diarrhea), and Grahani (inflammatory bowel disease).¹⁵

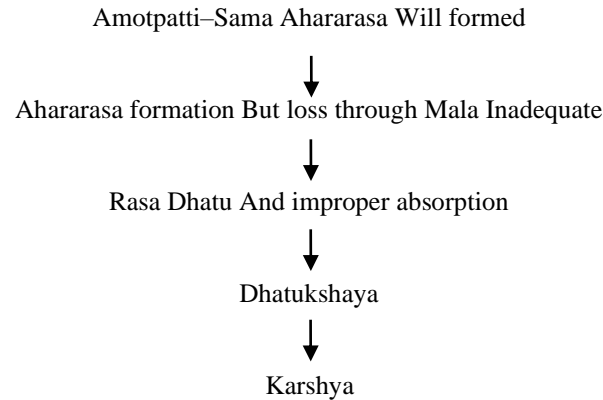
KARSHYA SAMPRAPTI (PATHOPHYSIOLOGY)¹⁶

Nidana Sevana



Agni Dushti





FACTORS INVOLVE IN *KARSHYA* (*SAMPRAPTI GHATAK*) -

Dosha- Vata

Dushya- Rasa

Agni- Mandagni

Srotas- Rasavaha

Srotodushti- Sanga

Adhishthana- Sarva sharira, especially *Sphiga, Udara, Griva, Twaka, Asthi*.

Avastha- Chirakari and Asukari

Children up to age five are thought to have much less physical development than their classmates of the same age and gender, according to modern perspectives. Failure to thrive is characterized by weight below the third or fifth centile, an inability to acquire weight over time, or a change in growth rate that crosses two major centiles, such as during a period from 75th to 50th. Malnutrition is defined as an adult BMI of less than 18.5.¹⁷

SIGNS AND SYMPTOMS OF *KARSHYA*:

According to descriptions, Achariya Charka is a slim individual who *Ati krusha* (remaining skin and bone), *Sthoola parva* (thick joints), *Shushka-sphic*, *udar*, and *greeva* (dried up buttocks, abdomen, and neck), *Dhamanijala santataha* (prominent vascular network), *Twagasthi shesho*, *Vyayam Atisauhityam* (the overly lean does not tolerate physical exercise, over saturation), *Kshutpipasamay-aushadham* (do not tolerate high in toxicity of hunger, thirst, disease, and drugs), and *Ati-shitoshna-maithunam* (too much of cold, heat, and sexual intercourse).¹⁸

CHIKITSA OF KARSHYA:¹⁹



Thus, the Agnidipana, Dhatusartavardhan, and Brimhana lines will serve as the treatment's guiding principles. Malnutrition should be treated appropriately when it coexists with other issues like anger, difficulty walking or speaking, and other illnesses.

Abhyantarachikitsa

By oral use of various *Kalpas* (Medicine preparations) *Trivruttakshira* (roots of *Operculina turpethum* boiled in milk), *Draksha rasa* (fruit juice of *Vitis vinifera*), *Haritakichurna* (powder of *Terminalia chebula*), can be used. *Kalyanakaghrita*, *Rajanyadichurna*, *Pippalyadighrita*, *Aravindasava*, *Chyavanprasha*, *Kushmandaavaleha* are used for *Dhatusaravardhan*.

Bahyachikitsa

Udavartana (dry powder massage), Abhyang (oil massage), Shirodhra (steadily applying medicated oil or liquids to the forehead), Shashtikashalipindsweda (sudation therapy with cocked rice), and Basti (medicated enema) are examples of external application therapies that can be used to stimulate children and aid in their rehabilitation. However, care should be taken to prevent factors that could worsen malnutrition.

Pathya

1) *Aahara*

nutrient-dense diet that has all the necessary minerals, proteins, fats, and carbohydrates.

2) *Vihara*

Playful activities, mental relaxation, music therapy, and active and passive physical exercise are examples of preventive and restorative strategies that are beneficial for the body and mind.

REVIEW OF MODERN LITERATURE

A condition known as undernutrition occurs when nutrients are consumed insufficiently, absorbed poorly, or lost excessively. Both undernutrition and overnutrition are included in the term malnutrition. However, undernutrition is sometimes used interchangeably with malnutrition and protein energy malnutrition (PEM). Children who are still growing are particularly susceptible to its effects. Undernutrition include stunting (low height for age), underweight (low weight for age), and wasting (low weight for height).²⁰

DEFINITION

"Malnutrition involves a cellular imbalance between the supply of nutrients & energy & the body's demand for them to ensure normal growth, maintenance & specific tissue functions," according to the World Health Organization. Protein energy malnutrition (PEM) is the most prevalent type of malnutrition in children.²¹



ETIOLOGY²²

- Poverty
- LBW (low birth weight)
- Infections
- Population Growth
- Poor Feeding habits
- High pressure advertising of baby foods.
- Social factors and working parents.

SYMPTOMS OF MILD/ MODERATE MALNUTRITION

- Loss of weight, or failing to grow or gain weight at the anticipated pace (faltering growth).
- Low muscle mass and body fat.
- Anxiety, impatience, mood fluctuations, learning disabilities, or a loss of focus.
- Weakness or lack of activity compared to kids of the same age.
- Anaemia.
- Pain in the bones and joints.

PROTEIN ENERGY MALNUTRITION

According to the World Health Organization (WHO), PEM is a group of clinical conditions that are most common in newborns and young children, are frequently linked to illness, and result from a coincidental deficiency in different proportions of protein and caloric.²³

Aetiology of Protein Energy Malnutrition

Primary PEM:- Primarily due to dietary deficiency.

Secondary PEM:- As an effect of some other illness.

CLINICAL CLASSIFICATION²⁴

Based on relative contribution of protein and energy diet.

Kwashiorkor – severe protein deficiencies accompanied by an energy deficit.

Marasmus - severe energy deficit, while there is also a protein insufficiency.

Marasmus Kwashiorkor- Clinical picture overlap between Marasmus and Kwashiorkor.



Pre- Kwashiorkor- Children who are affected do not have oedema, but they do have poor nutritional status and some kwashiorkor characteristics.

Nutritional Dwarfism- Nutritional dwarfism is the outcome of prolonged PEM that begins relatively early in childhood and continues for several years without causing kwashiorkor or marasmus.

Under Weight- Despite being undernourished, the child does not exhibit any signs of kwashiorkor or marasmus. The age-appropriate weight is between 60 and 80 percent.

Invisible PEM- Not often observed. It is necessary to detect invisible protein energy malnutrition (PEM) in toddlers who exhibit breast addiction.

RECOMMENDATION FOR PREVENTION OF MALNUTRITION²⁵

- It is recommended that mothers start breastfeeding as soon as possible after giving birth.
- The mother should be well informed about the significance of exclusively breastfeeding for the first six months of the baby's life and the appropriate weaning process that follows.
- People must get nutritional education about the importance of eating a healthy, affordable diet.
- Extra work needs to be done to increase the acceptance of family planning techniques in order to reduce the size of the family and provide enough space between children.
- Promoting environmental cleanliness is essential to lowering infection rates and ending the cycle of infections that result in malnutrition.
- The key to combating malnutrition, particularly undernutrition, is ensuring the socioeconomic development of the rural populace.
- The government should guarantee the smooth operation of health programs and increase funding for integrated health packages.

DISCUSSION

According to the Ayurveda Samhita, Karshya falls under the Rasaprodoshaja vikara, which modern science compares to malnutrition. It might be the main cause of a lot of illnesses. According to Ayurveda, Karshya is a distinct illness entity that also serves as a poor prognosis indicator (Arishta), a causative component, a premonitory symptom, a feature, and a consequence. While Acharya Charaka claimed that it depends on Ahara and Nidra among the Trayoupsthambha, Acharya Sushruta claimed that both Sthaulya and Karshya depend on Rasa dhatu.

It is quite difficult to distinguish between Karshya, Shosha, and Kshaya. While Kshaya and Shosha are Tridoshaja, Karshya is caused by Rasadhutu vikriti and Vata vitiation. Every other Karshya person has a



unique treatment plan, with the exception of Karshya prakriti, which is Vata prakriti (normal, healthy, lean individual). Acharya Charaka suggests Laghu santarpana as a cure for Karshya, but since Langhana is a Rasa Pradoshaja vikara, we also need to take it into consideration. Sadhya santarpana should be used to cure Sadya krisha (acute) people like Vyayama, Bhara, Adhva, and Vyadhi karshita. However, for Chira-krisha (chronic), Abhyasa santarpana is advised. Charakacharya placed a strong emphasis on getting enough sleep, living comfortably, having a calm mind, being happy, avoiding excessive activity, having sex, taking a bath, getting a luxurious massage, and dressing in white. as a Karshya regimen. Navaanna, Shali rice, wheat and its derivatives, milk, Dadhi, Ghrita, Mamsa-rasa, Ikshu-rasa, Guda-vikriti, Madya, Anuvasana basti, timely Shodhana, Rasayana, Vrishya yoga, and so on are all recommended foods for Karshya. All of the Madhura dravyas, including Payasya, Ashwagandha, Vidarigandha, Shatavari, Nagbala, and others, as well as Diwaswapna (day sleep), chastity, and others, are advised by Acharya Sushruta.

Brimhana is recommended by Acharya Dalhana nirantana (continuous). Brimhana was also suggested by Acharya Vagbhatta. Brimhana is the recommended course of treatment since Acharya Kashyapa incorporated Karshya into Vatavyadhi. The Kashyapa's viewpoint was adopted by Acharya Sharangadhara. As a distinct chapter including Nidana, Samprapti, and Chikitsa, only Acharya Bhavaprakash provided a detailed description of Karshya. In Medo-roga-nidanam, Acharya Yogaratnakara described Karshya, and his perspective is nearly identical to Charakacharya's.

It is evident from a careful analysis of every Acharya thought that they all supported the same course of treatment, which calls for Brimhana as a key for Karshya chikitsa. Brimhana (nourishing therapy) refers to anything that strengthens and enhances the bulk of the body. Bala, Pusti, and Karshya-dosha-vivarjana (free from disease of leanness) are all benefits of proper Brimhana. It decreased Vata, particularly Ruksha guna, the primary cause of Rasadhatu upashoshana. We should remember that Karshya is Rasa-pradosha vikara, where Langhana therapy is the primary treatment, even though Brimhana is the preferred treatment. We must select one type of Langhana, such as Deepana, Pachana, Shodhana, etc., out of ten., As a result, Laghu Santarpana is advised. Charakacharya recommended the use of garlands and scents with Soumanasya (to relax mind) properties to address psychological problems. Sound sleep is induced by priyadarshanam (good company), abhyanga, and snana. Vatika body constituents and aging (Jara Karshya) are effectively regulated by Brimhana alone. Sura should be utilized as



Anupana in Karshya to gain weight and obtain nutrients because Madya has the Srotoshodhaka property. This will yield the best results.

CONCLUSION

According to the current study, Brumhana is the therapy of choice for Karshya (malnutrition) and produces positive results. Malnutrition is a major burden on society, yet it can be effectively treated using Ayurvedic medicines and practices. Agni management is crucial for assimilation, which plays a significant part in the absorption of Brumhana Yoga. Drug administration is less effective than the basti method. In Karshya, Ayurveda is generally highly effective. Malnutrition (Karshya) is a serious issue for children in poor nations. The primary cause of this issue is growing children's inadequate intake, digestion, and absorption of different vitamins, minerals, and trace elements. In order to meet the body's numerous nutritional needs- which are critical for children's healthy growth and development as well as for boosting immune function in their early years- Ayurveda recommends balancing the intake of Aahar (a daily diet should include all of the diet's components, including protein, fat, carbs, and minerals).

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