



KARSHYA – A LITERATURE REVIEW

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ABSTRACT

Undernutrition is widely recognized as a major health problem in the developing country of the world. Children nutritional status is sensitive indicator of community health and nutrition. Under nutrition which indicates wasting (low weight for height), stunting (low height for age), underweight (low weight for age). *Karshya* term is mainly related to underweight condition of malnutrition. Due to malnutrition patients suffers from immunological deficiency and becomes prone to diseases commonly. A systemic study of *Karshya* literature and its management prevent nutritional deficiency. Ayurveda is mainly based on preventive aspect first rather than curative. *Karshya* is mentioned as *Aptarpanjanya Vyadhi* in Ayurveda.

KEYWORDS: Undernutrition, Wasting, Stunting, Underweight, *Karshya*, *Aptarpanjanya Vyadhi*.

INTRODUCTION

According to *Acharya Charaka*, over lean (*Karshya*) persons are described under eight despicable persons (*Ashtau-ninditiya*) along with over obese (*Medasvi*) person. An over lean person (*Karshya*) has dried up buttocks, abdomen, neck (*Shushka-sphic, Udar, Greeva*), prominent vascular network (*Dhamanijala santataha*), remnant of skin and bone (*Twagasthi shesho, ati krisha*), and thick nodes (*Sthola parva*).^[1] According to *Acharya Shushruta*, lean and fattiness of body depends upon *Rasa-dhatu*.^[2] *Karshya* may be correlated with a possible condition of undernutrition or protein energy malnutrition. Malnutrition or impaired nutrition leads to growth retardation low resistance to infections & many other health problems. According to the WHO, malnutrition is a global problem, having adverse effects on the survival, health performance and progress of population groups. The effects are of the highest order in the resource limited countries such as India.^[3]

Undernutrition is strongly associated with shorter adult height, less schooling, reduced economic productivity and, for women, lower offspring birthweight. low birthweight and undernutrition in childhood are risk factor for diabetes, hypertension, and dyslipidemias in adulthood.^[4]

5.1 LITERARY REVIEW

Ayurveda Literature

- In the *Ayurvedic* literature, description of *Karshya* (i.e. undernutrition or protein energy malnutrition) is

available from the *Ati - Krishta, Balshosha, Phakka Roga & Parigarbhika Roga, Shushka Rewati*.

- Nutritional deficiency can be correlated with *Karshya*.
- Other nutritional deficiency in childhood in which *Karshya* present as an early symptom^[7]
 - Balshosha* - This disease is explained by *Acharya Vagbhata*. As the name indicate, there will be *Shosha* i.e., emaciation of the body due to depletion of subcutaneous fat and tissues.
 - Phakka Roga - Phakka-Roga* is an unique and the only nutritional disorder or *Kuposhana Janya Vyadhi* explained by *Acharya Kashyapa*. No other author has explained this disease. This implies that there will be continuous deterioration of general health status of the child.
 - Parigarbhika Roga* - This is a special nutritional disorder explained in Ayurveda, which highlights the development of malnutrition during infancy period.
 - Shushka Rewati* - This *Graha* disease only explained by *Acharya Vagbhata*. In this condition, in spite of taking complete or balanced food regularly, the child is unable to gain weight and height as per age and becomes emaciated day by day.

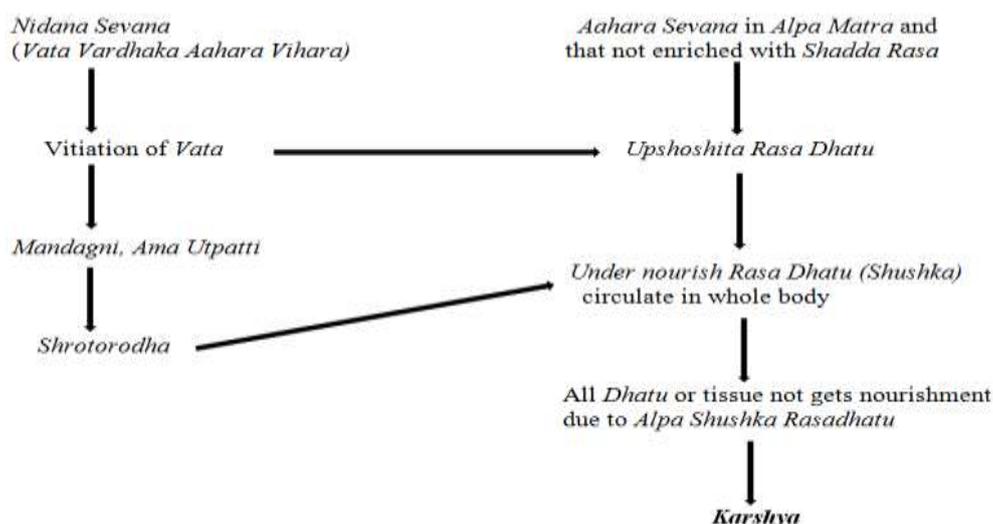
Nirukti of Karshya^[8]

कार्श्यं - “कृशस्य भावः कार्श्यं” According to this, *Karshya* means a person who is lean and emaciated.

Nidana^[9]

- *Ruksha Anna Pana Sevana* (Indulgence in rough food and drinks)
- *Langhana* (Fasting)
- *Pramitashana* (Little diet)
- *Kriyatiyoga* (Excessive subjection 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* (Excessive exercise)
- *Atisnana Abhyasa* (Excess bath)
- *Ruksha Udvartana* (Excess non - unctuous anointing to the persons)
- *Snana Abhyasa* (Indulgence in bath)
- *Prakruti* (Constitution)
- *Beeja dosha* (heredity)
- *Jara* (Old age)
- *Vikara-Anushaya* (Continued disorder)
- *Krodha* (Anger) make a person lean.

Diagrammatic Samprapti of Karshya^[10]**Samprapti Ghataka**

- *Dosha* – Vata Pradhana
- *Dushya* – Rasa, Mamsa, Meda
- *Agni*- Mandagni, Vishama
- *Koshth*- Krura Koshtha
- *Udbhava Sthana*- Pakvashaya
- *Adhishtana*- Sarva Sharira
- *Shrotas* – Rasavaha, Mamsavaha, Medavaha
- *Shroto Dushti* – Sanga
- *Rogamarga* – Aabhyantara
- *Vyadhi Sambhav*- Naveen –Mridu; Jeerna-Daaruna
- *Saadhya-Asaadhyata*- Kashta Sadhya

Lakshana of Karshya^[11,12]

The over lean is the person who has dried up buttocks, abdomen and neck, prominent vascular network, only remnant of skin and bone and with prominent joints.

Karshya Chikitsa^[13]

Line of treatment is *Nidan parivarsana*, *Samshodana* and *Samshamana*.

Karshya is treated by laghu Samtarpana and Brimhana medicines for promoting bulk.

Complications of Karshya

- *Karshya* is a causative factor (*Nidana*) and predisposing factor of other diseases like *Udara roga*, *Gambira hikka*, *Sannipatika Atisara*, *Gulma*, *Shosha*, *Kshyaja Klabhya*.
- *Karshya* is a premonitory symptom (*Purvarupa*) of *Arsha* and *Udara Roga*.
- *Karshya* is a bad prognostic sign of *Shvayathu* and *Hikka*.

Pathya (Congenial diet)^[14]

Aahara: Freshly harvested rice, *Mamsa rasa* of domestic marshy aquatic animals, *Dadhi*, *Ghee*, milk, Sugarcane, *Shali* rice, Wheat, Sugar and candy preparations etc.

Vihara: Sleep, joy, comfortable bed, abstinence from anxiety, pleasant sight, regular oil massage, unctuous unctuous bath, use of perfume and garlands etc.

Ausadha: Enema consisting of unctuous and sweet drugs, elimination of *Dosas* in time and administration of rejuvenating and aphrodisiac drugs. *Payashya*, *Ashwagandha*, *Salparni*, *Shatavari*, *Bala*, *Atibala*, *Nagbala*, etc. *Madhura* drugs should be administered.

Apathya: (Noncongenial diet): Intake of pungent, bitter and astringent substances, oilcake of mustard and til,

honey, night awakening, excessive physical and mental exercise etc should be avoided in *Karshya*.

Review of Modern Literature

Undernutrition is a condition in which there is inadequate consumption, poor absorption or excessive loss of nutrients. The term malnutrition refers to both Undernutrition as well as Overnutrition. However, sometimes malnutrition and protein energy malnutrition (PEM) are used interchangeably with undernutrition.^[15] Growing children are most vulnerable to its consequences.

Under nutrition which includes wasting (low weight for height), stunting (low height for age) & underweight (low weight for age).

Definition^[16]

According to WHO definition, "malnutrition involves a cellular imbalance between supply of nutrients & energy & the body's demand for them to ensure normal growth, maintenance & specific tissue functions".

The most common form of malnutrition in children is protein energy malnutrition (PEM).

Etiology^[17]

- 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

- Weight loss or not growing or putting on weight at the expected rate (faltering growth).
- Low body fat muscle mass.
- Mood swings, anxiety, irritability, learning issues or loss of clarity.
- Weakness or not active like other same age children.
- Anaemia.
- Bone and Joint pain.

Protein Energy Malnutrition (PEM)^[18]

The World Health Organization (WHO) defines PEM as range of pathological condition arising from co-incident lack in varying proportion of protein and

calories, occurring most frequent in infants and young children, and commonly associated with infection.

Aetiology of Protein Energy Malnutrition

Primary PEM:- Primarily due to dietary deficiency.

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

Clinical Classification^[19]

Based on relative contribution of protein and energy diet.

- **Kwashiorkor** – Gross deficiency of proteins with an associated energy inadequacy.
- **Marasmus** - Gross deficiency of energy, though protein deficiency also accompanies.
- **Marasmus Kwashiorkor**- Overlap of clinical picture of kwashiorkor and marasmus.
- **Pre- Kwashiorkor**- Affected children have poor nutritional status and certain features of kwashiorkor but do not have oedema.
- **Nutritional Dwarfism**- Prolonged PEM starting fairly early in life & going on over a number of years in life without developing kwashiorkor or marasmus result in nutritional dwarfism.
- **Under Weight**- The child is malnourished, but does not have any feature of marasmus and kwashiorkor. The weight for age is 60-80% of the expected.
- **Invisible PEM**- Not commonly seen. Toddlers who show breast addiction must be suspected to have invisible Protein energy malnutrition (PEM).

Anthropometrical Classification

Gomez's Classification

It was the first classification of Protein energy malnutrition (PEM) which came in 1956.

Grade I	90-75% of expected weight (Harvard St.)
Grade II	75-60% of expected weight (Harvard St.)
Grade III	<60% of expected weight (Harvard St.)

Bengoa's Modification of Gomez Classification

Any malnourished child with oedema is considered in Grade III irrespective of weight.

D.B. Jelliffe's Classification

Nutrition status (PEM)	Weight for age (Harvard) % of expected
Normal	>90
First Degree	80-90
Second Degree	70-80
Third Degree	60-70
Fourth Degree	<60

Indian Academy of Paediatrics Classification

Grade I	70-80% of expected weight (Mild malnutrition)
Grade II	60-70% of expected weight (Moderate malnutrition)
Grade III	50-60% of expected weight (Severe malnutrition)
Grade IV	<50% of expected weight (Very severe malnutrition)

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

Grade of malnutrition	Weight-for-age of standard (%)
Normal	> 80
Grade 1	70-80 (mild malnutrition)
Grade 2	60-70 (moderate malnutrition)
Grade 3	50-60 (severe malnutrition)
Grade 4	< 50 (very severe malnutrition)

Schedule For Meals^[20]

Children of < 2 years:- Minimum 3 complimentary food along with breast feeding.

Children of 2 – 10 years:- Minimum 4 meals (2 main meals and 2 snacks on demand)

Recommendation for prevention of Malnutrition^[21]

- Mothers should be advised to initiate breast feeding within one hour of delivery.
- Importance of exclusive breast feeding for the first 6 months of baby's life and proper weaning thereafter should be properly explained to mother.
- Nutritional education has to be imparted to the people regarding consumption of cost effective nutritious diet.
- Special efforts have to be made to improve acceptance of family planning methods for limiting the family and to give adequate spacing between children.
- Environmental sanitation has to be promoted in reducing infection and breaking the vicious cycle of infection leading to under nutrition.
- Socio-economic development among the rural masses needs to be ensured which is the important factor to tackle malnutrition, mainly undernutrition.
- Government should allot more money in health sector for integrated health packages and should ensure proper functioning of health programs.

Current Guidelines for prevention of Malnutrition^[22]

Care of nutritional needs is required at three stages; Nutrition during pregnancy, nutrition in infancy and nutrition in childhood. Fetal nutrition is totally dependent on maternal nutrition. In fact, intra uterine growth retardation (IUGR) may be due to maternal deprivation and or diseases in pregnancy. Infant nutrition should be through exclusive breast feeding up to 6 months, to meet the nutritional demands and to prevent morbidity. Following period is complemented with other foods along with breast feeding to meet the growing needs of the infant. Diet in children needs equal emphasis on both quality and quantity. Toddler needs more than half the portion of food that mother eats. The diet of pre-school children needs special attention to vitamins and minerals varieties; while school going children need 3/4th of food

that father eats. Children should not miss meals, especially breakfast.

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