

A LITERATURE REVIEW ON BALKARSHYA
(UNDERWEIGHT CHILDREN)

Dr. Megha Deepak Posugade. (Post Graduate Scholar, Department of Kaumarbhritya, Hon. Shri. Annasaheb Dange Ayurved Medical College, Ashta, Tal-walwa, Dist-Sangli, Maharashtra)

Dr. Nareshkumar Babar (Reader, Department of Kaumarbhritya, Hon. Shri. Annasaheb Dange Ayurved Medical College, Ashta, Tal-walwa, Dist-Sangli, Maharashtra)

Corresponding Author: Dr. Megha Deepak Posugade

ABSTRACT- In India around 3/4th of our pediatric population is suffering from one or other nutritional deficiency which can be termed as *Karshya*. *Karshya* can be considered one among the *Apatarpanjanya Vyadhi* and Undernutrition, Malnutrition can be considered or compared to *Karshya* which is caused due to inadequate supplementation and absorption of nutrients. Due to undernutrition paediatric patient suffers from immunological deficiency and becomes prone to diseases commonly. *Ayurveda* is mainly based on preventive aspect first rather than curative. A systemic study of *Balkarshya* literature and its management can prevent nutritional deficiency. Undernutrition has three subgroups: Underweight, wasting and stunting. The underweight child has low-weight-for-age. It means that the weight of this child is less than minus 2 standard deviation (-2SD) on the WHO Growth Standard for her/his age. An underweight child could be wasted or stunted, or both. Childhood undernutrition is an underlying cause in an estimated 45% of all deaths among under-5 children.

Under nutrition is a condition in which there is inadequate consumption, poor absorption or excessive loss of nutrients. Food (*Aahara*) is one of the three sub pillars of life as per Ayurvedic classics. The transforming unit from food into nutrition is termed as *Agni* or digestive fire, which forms the edifice upon which the

Ayurvedic system is built. According to *Acharya Charaka* over lean (*Atikrushya*) persons are described under eight despicable persons (*Ashtauninditiyapurusha*).

KEYWORDS- Undernutrition, Malnutrition, *Karshya*, *Balkarshya*, *Apatarpanjanya Vyadhi*.

INTRODUCTION- *Karshya* can be considered one among the *Apatarpanjanya Vyadhi* and under nutrition, malnutrition can be considered or compared to *Karshya*, which is caused due to inadequate supplementation and absorption of nutrients. *Karshya* is a clinical entity presented with features like, reduced physical activity, arrested growth, underweight etc. ^[1] Both *Charak* and *Sushrut* classify it under *Raspradoshaja vyadhi*. *Acharya Bhavprakash* has explained *Karshya* as a separate disease. *Karshya* can be apparently correlated with underweight. *Krishata* is a pre stage; it is to be treated with proper care and attention, which otherwise leads to *Atikarshya*.^[2] Undernutrition has three subgroups: Underweight, wasting and stunting.

The underweight child has low-weight-for-age. An underweight child could be wasted or stunted, or both. Childhood undernutrition is an underlying cause in an estimated 45% of all deaths among under-5 children.^[3] According to the National Family Health Survey (NFHS)5, carried out in 2019-21, 32.1% of India's children under the age of five are underweight ,35.5% are stunted and 19.3 % are wasted. Comparable figures for 2015-16 were 35.8%,38.4% and 21% respectively.^[4]

LITERARY REVIEW-

AYURVEDA LITERATURE

- In *Charak Samhita* *Karshya* is mentioned as an indication of *Brumhana chikitsa*. *Hetu, Lakshana, Samprapti, Chikitsa* of *Karshya* has been mentioned in *Susruta Samhita, Ashtanga Hridaya*.
- *Bhavprakash Samhita* is the only text where *Karshya roga* has been mentioned in separate chapter as *Karshyarogadhikara*.
- In *Sharangdhar Samhita*, *Karshya* has been explained with context of *Vatvyadhi*. In *Yogaratanakara samhita* under *Balrogaadhikar chikitsa* of *Karshya* has been mentioned.

Hetu^[5]-

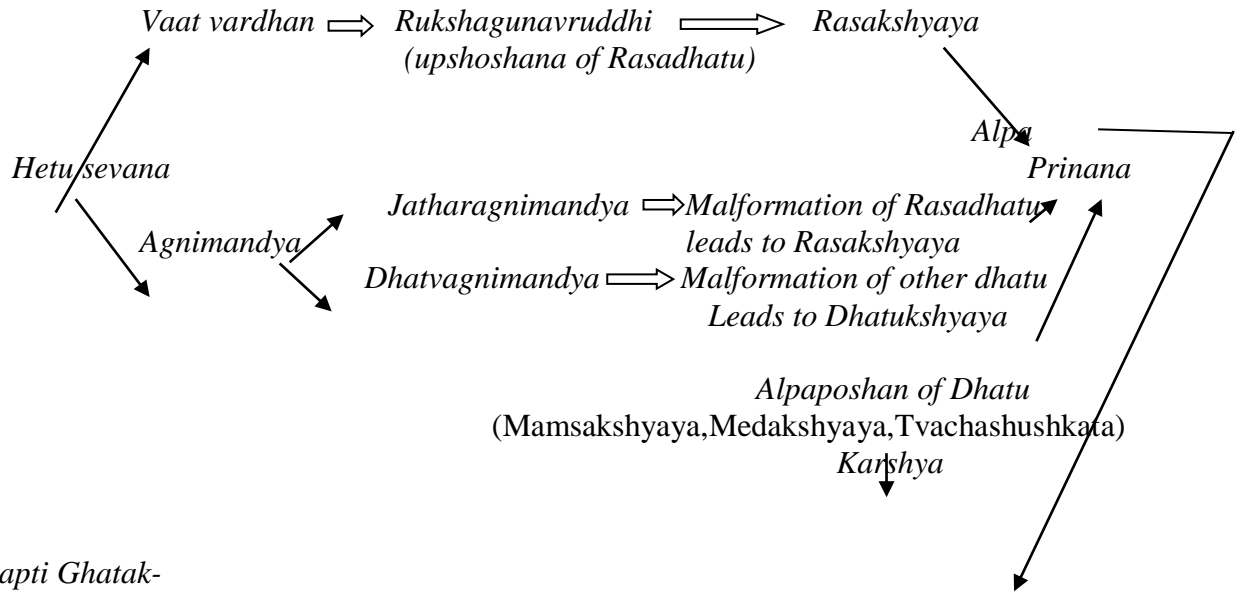
<i>haraj</i>	<i>shaya rasa atisevan, Langhana, Pramitashan, Rukshannapan, Vatalahar, Alpashana</i>
<i>haraj</i>	<i>adhyayan,Ativyayam,Dhyana,Ratri Jagrana, Kshudha Nigraha,Pipasa Nigraha, Ruksha Udvartan,Atisnanabhyasa</i>
<i>anasik</i>	<i>aya, Chinta, Krodha,Shok</i>

Lakshana (clinical features) of *Karshya*^{[6][7][8][9]}-

<i>Twakasthishesha (skin bone appearance)</i>
<i>Sthulaparva (Prominent joint)</i>
<i>Dhamanijaalsantata (Prominent venous network)</i>
<i>Shushka sphik udar griva(Emaciated buttock abdomen and neck region)</i>
<i>Atisauhitya Asahishnuta</i>
<i>Vyayam Asahishnuta</i>
<i>Pipasa nigraha asahishnuta</i>
<i>Kshudha nigraha asahishnuta</i>
<i>Mahaushadha Asahishnuta</i>
<i>Ati ushna Asahishnuta</i>
<i>Ati sheeta Asahishnuta</i>
<i>Kriyasu alpa prana</i>
<i>Sthula anana</i>
<i>Rakta pittaj amaya</i>

Samprapti ^[8]-

In persons who does above mentioned *hetusevana,Rasadhatu* which get formed will be less in quantity and dry, during circulation throughout the body it does not satisfy the other Dhatus by providing nourishment because of its inadequate quantity and so leads to profound emaciation that is *Karshya*.



Samprapti Ghatak-

Dosha- Vata Dosha

Dushya-Rasa, Meda, Mamsa

Agni- Vishamagni, Mandagni

Ama- Samata

Koshtha-Krura Koshtha

Udbhava sthana-Pakvashaya

Strotas affected- Rasavaha, Mamsavaha, Medovaha

Stroto dushti- Sanga

Adhishthana- Sarvasharir

Rogmarga- Abhyntara rogmarga

Sadhyasadhyatwa- Kashtasadhya

Karshya Upadrava^[10]-

Karshya without proper treatment leads to Pleeha (spleen enlargement) due to Medakshaya,

Shwasa(because of lowered immunity), *Kshaya* (because of *kshaya* of other *Dhatus*), *Gulma*, *Udara* ,*Arsha*, *Grahani* (because of *Agnimandya*).

Chikitsa of *Karshya*^{[11][12]}.

Vata upkrama can be adopted to treat *Karshya* as *Karshya* is *Vatapradhan vyadhi*. *Brimhana* therapy is important as the specific line of treatment according to all *Acharyas*. *Acharya Charak* mentioned *Brimhana* therapy for *Karshya* using *Laghu -Santarpana dravya*. The principle management of *Karshya* should be in following manner-

1)*Nidana Parivarjana*- This is the prophylactic measure. Patient should avoid all causes which produced this condition and indulge in sleeping at day time, not doing any physical exercise.

2)*Samshodhana*- *Apatarpan* is the main cause of *Karshya* hence *Brimhana* is important therapy. But *Samshodhana* which is *Mridu* in nature can be advised. *Tailabhyanga*, *Snigdha Udvartana* is indicated by *Acharya Charaka*. *Acharya Sushrut* and *Charak* advised *Brimhana Basti* which is *Mridu* and *Snigdha*.

3)*Sanshamana*- It is conservative therapy. The drugs used in the treatment are *Ashwagandha*, *Vidarigandha*, *Shatavari*, *Bala*, *Atibala*, *Nagabala* etc.

4)*Ahara*- *Krusha* person should administer milk, curd, ghee meat, sugarcane, jaggery, *Shali*, *Shashtika*, *Yava*, *Masha*, *Godhuma* etc.

5)*Vihara*- Proper sleep, comfortable bed, relaxed mind, calmness, *Snana* (bath)etc.

REVIEW OF MODERN LITERATURE-

Underweight (Low weight-for-age) is the condition in children which comes under the concept Undernutrition. It means that the weight of the child is less than minus 2 standard deviation (-2 SD) on the WHO Growth Standard for her/his age.

Epidemiology-

During the first six months of life, 20-30% of children are already Undernourished, often because they were born low birthweight. The proportion of undernutrition starts rising after 4-6 months of age. Late introduction of complementary feeding and inadequate food intake leads to increasing predisposition to undernutrition. The proportion of children who are stunted or underweight increases rapidly with the child's age until about 18-24 months of age. Thus, nutrition during the first 1000 days since conception, encompassing pregnancy and the first 2 years of life, is of profound importance for realizing the physical and intellectual potential.

Classification of Underweight Children^[13]-

As per Wellcome Trust Classification-

0	80-75 %
1	75-70 %
2	70-65 %
3	65-60 %

Sub classification^[3]-

1) Moderate Underweight- Weight-for-age below minus 3

SD (<-2SD to – 3 SD)

2) Severe Underweight- Weight-for-age minus 3 SD (<-3 SD)

Weight Calculation Formula^[14]-

As per revised APLS Formula-

For 6-12 years

$$(\text{Age in years} \times 3) + 7$$

Treatment of underweight-

Ensuring optimum nutrition of the mother before and during pregnancy, and optimum feeding of children in first 2 years of life (including breastfeeding for first 2 years, and adequate solid feeding after 6 months of age) is absolutely crucial in human life. In clinical practice, it is imperative to plan diets for different conditions among children with various ages both healthy and sick.

DISCUSSION-

Karshya is described as *Apatarpanjanya Vyadhi*. *Charaka* has described the details about *Karshya* in *Astoninditiya Adhaya* and line of treatment and principle of management is advised. *Karshya* is considered as a clinical state of under nutrition by *acharya Sushruta*. The role of *rasa* in genesis of *Karshya* has been described. *Karshya* is mentioned as an adverse effect of *Langana in Ashtanga Hridaya*. Following *Sushruta*, administration of *Brimhan* therapy is also advised by *Vagbhat*. *Sarangadhar* has included *Karshya* in *Nanatmaja Vatavyadhi*. In *Bhav Prakash Karshya* has been depicted as a separate chapter. In *Yogaratanakar Karshyaroga* is mentioned in the *Medoroganidan*.

The aetiological factors of *Karshya* are *Pipashanigraha*, *Krodh* and *Vikaraanusaya*. These factors have been categorized into dietary factor, behavioral factor, malpractices, mental factors and iatrogenic factor as described in disease review. These factors favor aggravation of *Vayu*. Aggravation of *Vayu* causes *Upososhan of Rasa dhatu* in both *Pachakagni* and *Dhatavagni* level. The exaggerated *Rukshaguna of Vayu*, *Ushnaguna of pitta* and loss of *Snigdhasguna of Kapha* causes *Soshankarya of Rasa dhatu in Jatharagni* level. So *Rasa dhatu* is not formed properly. The main function of *Rasa dhatu* is *Tusti* and *Prinan* which means *Rasa dhatu* provides nutrition to onward *Dhatu*s. This function is hampered. Formation of *Ama in Dhatavagni* level hampers the ultimate absorption and metabolism of *Rasa dhatu*. Dysfunction of these *Vyanvayu in Karshya* causes defective transformation and circulation in metabolic activity phenomenon jointly causes alteration in digestion, absorption and metabolism in *Jatharagni* and *Dhatavagni* level, hence formation and nutrition of *Dhatu*s in chronological order is not maintained. The management of *Karshya* can be done by *Brimhana*.

CONCLUSION

Underweight is described in modern medicine but is similar to nutritional disorder in Ayurveda like *Karshya*. Ayurveda has well explained clinical symptoms, causative factors, complications and therapeutic guidelines for *karshya*. Knowledge of causative factors will help to reduce or avoid pathogenesis of disease. Different aspects of nutritional deficiency and proper understanding of pathogenesis of condition provide valuable key for the effective management. *Brimhan*, proper diet and routine along with the *Shodhana* and *Shamana* therapy provides perfect treatment plan for the disease *Karshya*. By which we can give healthy and immunologically strong individuals to the society.

REFERENCES

1. Ravindra R. Dhanawade *TO STUDY THE EFFECT OF SHATAVARYADI CHURNA IN BALAKARSHYA*. 3, *Shevgaon, Ahemdnagar : INTERNATIONAL JOURNAL OF RESEARCH IN AYURVEDA AND MEDICAL SCIENCES*, 2019, Vol. 2. ISSN: 2582-2748 .
2. Dr.Nilofar.S.Sheikh *AN AYURVEDIC PERSPECTIVE OF KARSHYA AND ITS MANAGEMENT*.Nagpur,Maharashtra: *WORLD JOURNAL OF PHARMACEUTICAL RESEARCH*,2021,Vol.10,Issue 5,605-614.ISSN-2277-7105.
3. O. P. Ghai *GHAJ Essential Pediatrics*. [ed.] Arvind Bagga Vinod K Paul. New Delhi : CBS Publisher & Distributors Pvt Ltd, 2019. pp. 93-94. Chapter 7 .
- 4.

5. rchiips.org/nfhs/NFHS-5_FCTS/India.pdf
6. Acharya Vaidya Yadavji Trikamji. *Susrutasamhita*. Varanasi : Chaukhambha Orientalia, 2005. p. 69. Sutrasthan 15/09.
7. Bhisagratna Pandit Sri Brahma sankar Misra. *Bhavaprakash of Sri Bhavamisra*. [ed.] 9th Edition. Varanasi : Chaukhambha Sanskrit Sansthan, 2005. pp. 412-413. Vol. 2. Chikitsa 40.
8. Dr.Brahmanand Tripathi. *Charaka-Samhita*. Varanasi : Chaukhambha Surbharti Prakashan, 2004. p. 417. Sutrasthan 21/13-15.
9. Acharya Vaidya Yadavji Trikamji. *Susrutasamhita*. 8th Edition. Varanasi : Chaukhambha Orientalia, 2005. p. 73. Susrut sutrasthan 15/32.
10. Anna Moreswar Kunte. *Astanga Hridaya*. Varanasi : Chaukhamba Sanskrit Sansthan, Re-print 2020. p. 183. Sutrasthan 11/06.
11. P.V.Sharma, *Charaka Samhita*. Vol-1. Varanasi : Chaukhambha Orientalia , Re-print 2008. p. 145. Sutrasthan 21/14.
12. Prof.K.R.Srikantha Murthy , *Susrutasamhita*. Vol-1. Varanasi : Chaukhambha Orientalia , Re-print 2010. p. 108. Sutrasthan 15/33.
13. P.V.Sharma, *Charaka Samhita*. Vol-1. Varanasi : Chaukhambha Orientalia , Re-print 2008. p. 146-147. Sutrasthan 21/29-34.
14. Santosh Kumar. *Paediatric Clinical Examination*. 4th Edition. Hyderabad : Paras Medical Publisher, 2014. p. 33. Ch 4th .
15. Meherban Singh. *Pediatric Clinical Methods*. 6th Edition. New Delhi : CBS Publishers & Distributors Pvt Ltd, 2020. p. 66. Ch 5.