

AYURVEDIC UNDERSTANDING AND MANAGEMENT OF KARSHYA (MALNUTRITION) IN CHILDREN - A CASE REPORT

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ABSTRACT

Karshya is a disease entity or a condition in which there occurs emaciation to the body of a person, with less quantity of *Rasa dhatu*, further resulting in *Mamsakshaya*. *Atikrisha* is one among the *Ashtauninditheeya*. *Karshya* can be seen as a separate disease and also as a symptom in many a number of diseases. A person with *Karshya* will be presenting with typical features of *Shushka sphik*, *Udara*, *Greeva*, *Dhamanijala santata*, *Twa-gasthi shesho*, *Sthoola parva*. *Karshya* can be taken as mild to moderate form of malnutrition. Malnutrition is a global problem, having adverse effects on the survival, health performance and progress of population groups. Malnutrition can be both over and undernutrition. But, Protein Energy Malnutrition is related to undernutrition. South Asia, where India is also included is well known for the highest prevalence of underweight children. Malnutrition is one among the major cause of morbidity and mortality in childhood period. Supplementation of nutritious food and implementation of balanced diet for children in the most essential period of their life, growing phase will keep them safe and healthy. A 2 year 8 months old female patient was admitted to the In Patient Department of Kaumarabhritya, SDM College of Ayurveda and Hospital, Hassan with complaints of not gaining weight appropriate for age and associated with less interest towards food since 1 year. This condition can be understood as *Karshya*. After a thorough clinical examination and evaluation, started with *Deepana Pachana*, *Sarvanga Abhyanga*, *Swedana*, *Basthi* and *Brimhana*, *Karshyahara oushadhi*. There were significant improvements in the condition of the patient. Later, she was discharged with medicines, especially the one with *Brimhana* and *Rasayana* effect to be continued at home.

Keywords: *Karshya*, *Kuposhanajanya vyadhi*, *Brimhana*, *Rasayana*

INTRODUCTION

Karshya can be understood as a separate disease entity and also as an important feature of many diseases as well. It is considered as a *Kuposhanajanya vyadhi*.

Karshya comes under the category of *Apatarpana Janya Vyadhi*. The *Nidana* of *Karshya* can be understood at the levels of *Aharaja*, *Viharaja*, *Manasika*

and various other factors as well. *Aharaja nidana* includes *Langhana*, *Sevana* of *Ruksha Anna pana*, *Anashana*, *Pramithashana*, *Alpashana* and *Vata Prakopaka Anna pana* also. *Viharaja nidana* includes *Kriyatiyoga*, *Vata Atapa sevana*, *Atishrama*, *Ativyayama*. Whereas, *Manasika Nidana* includes *Chintha*, *Shoka*, *Bhaya*, *Krodha* and *Vegadharana*. *Ahara Dosha* stands as the main predisposing factor for this disease and *Alpashana* and *Vishamashana* (false habit of intake) specially results in the development of *Karshya*¹. The clinical manifestations in the case of *Karshya* are *Shushka Sphik Udara Greeva* (Emaciation and wasting of buttocks, abdomen and neck region), *Dhamanijala santhatha* (Appearance of network of veins and tendons all over the body), *Twagasthi shosha Athi krisha sthulaparvana* (Prominence of skin, bones and joints). *Dalhana* has mentioned as “*Karshyam Mamsakshayam*”; which means that a person having lean and thin body personality but does not have any other complaints can be understood as *Karshya*. *Karshya* is a *Vata pradhana vyadhi* and occurs mainly as a result of *Dhathu kshaya*². *Kuposhana janya vyadhi* occurs due to *Agnimandyata* and *Dhathukshaya*. The appropriate way of managing such conditions is by *Agni deepana*, *Brimhana* and *Dhathusaravardhana*. *Rasayana* is an inevitable therapeutic option in such cases³. *Agni deepana* stands first in the management as there is a greater need of improving the function of *Agni*. There are many a number of *Rasayana dravyas* in Ayurveda, of which those which are both *Rasayana* and *Brimhana* like *Aswagandha*, *Bala*, *Shathavari* and *Kapikachu* are the common treatment options.

Malnutrition is a global problem, having the adverse effects on health performance, survival and even the progress of population groups, as per World Health Organization (WHO)⁴. As per the statistics of National Family Health Survey-4 (NFHS-4) carried out in 2015-16, 36% children under the age of five in India are underweight, 38% are stunted and 21% are wasted⁵. It is even estimated that, there are only 10% of children between the age group of 6 to 24 months have an adequate nutritional intake⁶. Under nutrition is a state of poor nutritional status as a result of inadequate intake, mal absorption or excessive loss of nutrients⁷. South Asia, where India is also included is well known for the highest prevalence of underweight children⁸. Underweight is a low weight for age. It can even be a combined indicator of acute as well as chronic under nutrition. Undernourished children are at a higher risk of infections and mortality. It is associated with 35% of under-5 child deaths⁹. Underweight children in rural areas (38%) is more than that in urban areas (29%)¹⁰. There are many contributing factors which paves way for under nutrition among children. They are ignorance, poor socio-economic status, faulty feeding techniques, faulty food habits, health issues, joint families, lack of proper spacing between pregnancies. Under nutrition in childhood is having a strong link with shorter adult height, poor lean weight, less schooling, low cognition, reduced economic productivity and in women, lower offspring birth weight. The management of malnutrition mainly depends on its severity. In order to prevent these types of conditions, proper action plan is essential not only at the individual level, but also in the societal level.

CLASSIFICATION OF PEM:

Table 1: Indian Academy of Paediatrics (IAP) Classification¹¹

GRADE	CHARACTERISTICS
First Degree	Weight between 80 and 70% of expected for age.
Second Degree	Weight between 70 and 60% of expected for age.
Third Degree	Weight between 60 and 50% of expected for age.
Fourth Degree	Weight below 50% of expected in case the child has demonstrable pitting edema, the letter “K” is placed in front of the evaluated grade.

CASE HISTORY

A 2 year 8 months old female patient was brought to the Out Patient Department of Kaumarabhritya, SDM College of Ayurveda and Hospital, Hassan by her parents with complaints of not gaining weight appropriate for age and associated with less interest towards food since 1 year. This child, does not like homely feeds, but likes bakery food products, that too in less quantity.

HISTORY OF PRESENT ILLNESS:

This child was born by Full term normal vaginal delivery. Baby cried immediately after birth. Birth weight was 2950gms. No history of any NICU stay and no any obvious congenital anomalies were there. All the developmental milestones were attained appropriate for age and regularly immunized till date. The child was apparently healthy 1 year back. Then she developed with lack of interest towards feeds and not gaining the weight appropriate for her age.

The child likes to play a lot, but will take only little amount of food. Child was always engaged in play activities and the energy expenditure was spent mainly

for the same. After completing one and half years of age, the parents have noticed that, compared to other children, she is not gaining proper weight. Day by day, her interest towards food has reduced. In the beginning, the parents have taken the child for consultation to many doctors nearby, where they have given health tonics, which they have continued for few months, but did not get any satisfactory relief.

As days passed, the parents felt like there is a need to try Ayurvedic medications to this child. Then, they have decided to bring the child for a better evaluation and management in SDM College of Ayurveda and Hospital, Hassan.

After a thorough interrogation with the parents regarding the diet, life style and habits of the child and the history of present illness and after a proper evaluation regarding the present condition of the child, he was admitted to the inpatient department of our hospital and planned for *Deepana pachana, Sarvanga Abhyanga, Swedana, Basthi* and *Brimhana, Karshyahara oushadhi*.

EXAMINATION:**Table 2:** Assessment of general condition of the child:

Bowel	Altered
Appetite	Slightly reduced
Micturition	Regular
Sleep	Sound

Table 3: Assessment of Karshya

PARAMETER ¹²	FINDINGS
<i>Kshudha</i> (Hunger)	Slightly reduced
<i>Koshta</i> (Bowel habits)	Altered
<i>Daurbalya</i> (Generalised weakness)	Generalised weakness present
<i>Nidra</i> (Sleep)	Sound
<i>Aakruthi</i> (Appearance)	General appearance is lean
<i>Cheshta</i> (Activities)	Reduced activities

Table 4: Anthropometrical Assessment

Anthropometry	BT
Weight	8.1kg
Height	90cm
Head Circumference	48cm
Chest Circumference	49.5cm

Mid Upper arm Circumference	15cm
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Table 5: CHIEF COMPLAINTS:

SL No.	Complaints
1	<i>Shushka Sphik</i> (Dried up buttocks)
2	<i>Shushka Udara</i> (Dried up abdomen)
3	<i>Shushka Greeva</i> (Dried up neck)
4	<i>Dhamanijala santataha</i> (Prominent vascular network)
5	<i>Twagasthi shesho</i> (Remnant of skin and bone)

TREATMENTS GIVEN

A single course of treatment which comprises of *Dee-pana Pachana*, *Sarvanga Abhyanga*, *Swedana* and

Basthi along with *Karshyahara* and *Brimhana ou-shadhi* was given.

Table 6: TREATMENTS GIVEN:

DAY	TREATMENTS GIVEN:
1 to 10:	<ol style="list-style-type: none"> <i>Deepana paachana</i> with: <i>Panchakola phanta</i> (20ml-20ml-20ml) before food- [Only for first two days] <i>Sarvanga Abhyanga</i> with <i>Mahamasha thaila</i> <i>Shashtika Shali Pinda Sweda</i> (S.S.P.S) <i>Matra Basthi</i> with <i>Aswagandha Ghrita</i> (20ml) <i>Ksheerapaka</i> with a powder combination of <i>Aswagandha</i>, <i>Bala</i> and <i>Shathavari</i> (20ml-20ml-20ml) <i>Aswagandha Leha</i> (1sp-0-1tsp) with Warm milk before food. <i>Draksharishta</i> (1tsp-0-1tsp) with equal amount water after food.

ADVISE AT THE TIME OF DISCHARGE:**Table 7: Advice at the time of discharge:**

SL No.	TREATMENT
1	<i>Abhyanga</i> (Daily body massage) with <i>Mahamasha thaila</i> -to be continued in home.
2	<i>Hingwashtaka Churna</i> (1tsp-1tsp-1tsp) with food.
3	<i>Aswagandha Leha</i> (1tsp-0-1tsp) with warm milk before food.
4	<i>Draksharishta</i> (1tsp-0-1tsp) with equal amount water after food.
5	<i>Ksheerapaka</i> with powder combination of <i>Aswagandha</i> , <i>Bala</i> and <i>Shathavari</i> (20ml-20ml-20ml) to be continued in home.
6	<i>Ushna Jala Pana</i>

OUTCOME OF THE TREATMENTS:**Table 8: Results**

Anthropometry	BT	AT
Weight	8.1 kg	8.75 kg
Height	90cm	90cm
Head Circumference	48cm	48cm
Chest Circumference	49.5cm	49.75cm
Mid Upper arm Circumference	15cm	15cm

PATIENT AND CARE TAKER'S FEEDBACK:

- As per the mother's statement, the child was with complaints of not gaining weight appropriate for

age and associated with less interest towards food since 1 year. They had shown the child to few doctors and health tonics were given, but could not get any satisfactory change in the condition of this child. But, once the course of treatment started, appetite has improved comparatively within first 2 to 3 days.

2. In the course of treatment which comprises of 10 days, child's interest towards food has increased day by day from the outset.
3. General health status of the child has improved well after the full course of treatment.
4. Significant improvement in the weight was noted.

CLINICIAN ASSESSED OUTCOMES:

1. This child was with complaints of not gaining weight appropriate for age and associated with less interest towards food since 1 year. Remarkable changes were noticed in the appetite and digestion of the child.
2. After initiating the treatments, child has started accepting feeds comparatively easier and started asking for it when hungry.
3. Initially, the child was said to have generalised weakness in the body because of inappropriate weight gain and loss of appetite, which was conveyed by parents. After the course of treatment, general health status has improved.
4. Weight has increased from 8.1kg to 8.75 kg by the completion of 10 days of treatment.

Table 9: Improvements Noted

SL No.	PARAMETER ¹²	IMPROVEMENTS
1	<i>Kshudha</i> (Hunger)	Appetite has very well improved.
2	<i>Koshta</i> (Bowel habits)	Bowel habits improved
3	<i>Daurbalya</i> (Generalised weakness)	Weakness reduced.
4	<i>Nidra</i> (Sleep)	Sleep pattern improved.
5	<i>Aakruthi</i> (Appearance)	General health status improved.
6	<i>Cheshta</i> (Activities)	Activities have improved.

DISCUSSION

In the present case, the 2 year and 8 months old child presented with symptoms like loss of interest towards food along with loss of appetite and not gaining the weight appropriate to the age since 1 year. In Ayurvedic point of view it can be understood as "Karshya" which occurred due to *Agnimandya* over a longer period. *Mamsa kshaya* being a cardinal feature of *Karshya* was present in the child. It was manifested in *Sphik*, *Udara* and *Greeva pradesha* in the form of *Shushkata*. The *Mamsa kshaya* manifested in the form of *Shushkata* is the resultant effect of increased *Ruksha guna* of *Vyana vata*. Other *lakshanas* of *Karshya* like *Twak shosha* and *Asthi shosha* represents the *Ruksha guna vrudhi* in *Twak* resulting in *Twak gata vata* where *Karshya* is again a *Lakshana* and *Asthi-gata vata* where *Mamsa kshaya* is a *lakshana*. *Dhamani jala santata* and *Sthoola parva* are the net effect of *Mamsa kshaya* in *Karshya*. The root cause for the

manifestation of *Karshya* is attributed to *Agnimandya* primarily at *Koshta* and then at the *Rasa dhatu* level. *Agnimandya* at *Koshta* results in the formation of *Ama* and thereby lead to *Bhakta dwesha*. *Agnimandya* at *Rasa dhatu* level resulted in *Rasa dhatu vrudhi* and lead to reduced *Prasada bhaga* of *Rasa dhatu* which further resulted in *Uttarottara dhatu kshaya* from *Rasa* till *Mamsa* in the present case.

Ama pachana followed by *Agni deepana* at the level of *Koshta* and *Dhatu* level were the primary aim of the treatment. It is rightly told in classics that *Brimhyasthu mridu langhayet*. In the present case *Langhana* was achieved through *Deepana* and *Pachana* using *Panchakola phanta* for 2 days. After achieving the *Samyak langhita lakshana* like *Kshut pravritti* and *Samyak pravritti* of *Pureesha*, the mode of treatment was shifted from *Langhana* to *Brimhana* in the form of *Sarvanga abhyanga* followed by *Shashtika shali pinda sweda*. *Mahamasha taila* was selected for *Abhyanga* as it was *Mamsa dhatu vrudhikrit* and

Pushtidam. Internally *Brimhana* was administered through *Matra basthi* using *Aswagandha ghrita*. *Shamanoushadhis* like *Ksheerapaka* was administered using *Vata pittahara* drugs like *Aswagandha*, *Bala* and *Shatavari*. The purpose of giving *ksheerapaka* was to provide proper *dhatu poshana* and *dhatu bala*. *Draksharishtam* was administered with aim of providing *Rakta dhatwagni deepana*. *Ashwagandha leha* was given as a mode of *Rasayana*. After 10 days of treatment course, significant changes were observed in patient assessed and clinician assessed symptoms. The *Shamanoushidhi* were continued as discharge medicines for a period of 1 month. In addition to the above medicines, *Hinguvashataka churna* was also instructed so as to ensure *Agni deepana* at *Koshta* and *Rasa dhatu* level. *Mahamasha thaila abhyanga* was advised to continue daily to achieve *Shareera dhardyata* and to prevent *Vata prakopa*. The child was advised to come for follow up after 1 month.

CONCLUSION

Malnutrition state in children can be diagnosed as *Karshya* in *Ayurveda*. The treatment protocol of *Karshya* like *Mridu langhana* followed by *Brimhana* was adopted in the present case. *Bahya* and *Abhyantara sneha prayogas* were adopted so as to achieve *Brimhana*. The treatments were mainly focussed on improving the *Agni* at the level of *Koshta*, *Rasa*, *Rakta* and *Mamsa dhatu level*. There were significant changes in various parameters including body weight, bowel status, generalized weakness etc after 10 days of treatment.

REFERENCES

1. Geeta, I. P. Anand, K. S. Patel, Effect of Vidarikandadi vati and Kshirabala Taila Basti in Karshya in Children: AYU-Vol. 30, No. 1 (Jan-Mar.) 2009, pp 73-76.
2. Shiksha Kumari, Minakshi Chaudhary, Rakesh Sharma, A Clinical study to evaluate the effect of Kshira Bala Thaila Basti in Karshya: Journal of Ayurveda and Integrated Medical Sciences. Jan-Feb 2018, Vol.3, Issue 1.
3. Patil Amrut Ramagounda, Reena Kulkarni, Shailaja.U, Nithin S.A, Virupaxayya Swami, Effect of Aswagandha Ghrita on Karshya (Underweight); An explorative study: Int.J.Res.Ayurveda Pharm.7 (Suppl 2), Mar-Apr 2016.p.156-159.
4. Suraj Gupte. The Short Textbook of Pediatrics, Jaypee Brothers Medical Publishers, 12th Edition: 2016.p.197.
5. Vinod K Paul, Arvind Bagga. Ghai Essential Pediatrics, CBS Publishers and Distributors Pvt Ltd, Ninth Edition: 2019.p.94.
6. Vinod K Paul, Arvind Bagga. Ghai Essential Pediatrics, CBS Publishers and Distributors Pvt Ltd, Ninth Edition: 2019.p.94.
7. Suraj Gupte. The Short Textbook of Pediatrics, Jaypee Brothers Medical Publishers, 12th Edition: 2016.p.197.
8. Suraj Gupte. The Short Textbook of Pediatrics, Jaypee Brothers Medical Publishers, 12th Edition: 2016.p.197.
9. Vinod K Paul, Arvind Bagga. Ghai Essential Pediatrics, CBS Publishers and Distributors Pvt Ltd, Ninth Edition: 2019.p.93.
10. Vinod K Paul, Arvind Bagga. Ghai Essential Pediatrics, CBS Publishers and Distributors Pvt Ltd, Ninth Edition: 2019.p.94.
11. Suraj Gupte. The Short Textbook of Pediatrics, Jaypee Brothers Medical Publishers, 12th Edition: 2016.p.206.
12. Vijayalaxmi Mallannavar, Shailaja U, Arun Raj GR, Deepthi Viswaroopan, Ashwin Kumar Bharati, Effect of Karshyahara yoga in the management of Malnutrition in Preschool children: Int.J.Res.Pharm.8(2), 2017.p.41

Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Kannan Sagar et al: Ayurvedic Understanding And Management Of Karshya (Malnutrition) In Children - A Case Report. International Ayurvedic Medical Journal {online} 2019 {cited April, 2019} Available from: http://www.iamj.in/posts/images/upload/660_665.pdf