

## An Approach towards Management of Balshosha (Moderate Acute Malnutrition) by Ayurveda regimen- A Single Case Study

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### ABSTRACT

It has been estimated that in India, 65 percent, i.e., nearly 80 million children under five years of age suffer from varying degrees of malnutrition. Malnutrition means deficiencies, excesses or imbalance in person's intake of energy and/or nutrients. Modern mainstay of treatment for Moderate acute malnutrition is provision of adequate amount of protein and energy which is at least 150 kcal/kg/day and nutritious home food. Although the mentioned technique carefully assesses hunger, but still there is a significant gap exists because no appetite stimulant with proven safety and efficacy in malnourished children is offered by the mainstream medical system.

In Ayurved Samhitas, Karshya, Phakka, Balshosha and Parigarbhika these diseases are mentioned which can be correlated with Malnutrition. Agni is the primary cause of all of these illnesses. The primary changing element of the body is the agni, or digestive fire. Malnutrition results from a hindered Agni.

Most of these disorders' treatment modalities are based on Deepana Pachana, Bhrimhana, Srotoshodhana. The case was handled using an Ayurvedic regimen, which Deepana-Pachana, Brimhana Karyaa and Agni Vardhana.

### I. INTRODUCTION

Childrens are the buds in a garden and should be carefully and lovingly nurtured, as they are the future of the nation and the citizens of tomorrow. Malnutrition is a major problem and increases the mortality and morbidity. Those children who live below the poverty line i.e. in an environment of starvation and multideprivation have physical and developmental retardation. Malnutrition means deficiencies, excesses or imbalance in person's intake of energy and/or nutrients<sup>1</sup>. The term malnutrition encompasses both ends of the nutrition spectrum, from undernutrition to overnutrition<sup>2</sup>. Undernutrition occurs due to

inadequate intake, poor absorption or excessive loss of nutrients<sup>3</sup>. The two classification of undernutrition are Moderate acute malnutrition and severe acute malnutrition.

Moderate acute malnutrition is when there is low weight for height (Z score or SD Score between -2 and -3) or low height for age (Z score or SD Score between -2 and -3).

Environmental factors such as parental education, socioeconomic level, parental behaviour, and standard of living have an impact on children's growth and development. Nutritional factors like as inappropriate nursing, weaning techniques, and food during illness have a negative impact on a child's growth and development.

Large family sizes, lack of spacing between two children, neglect of female children, and unplanned pregnancies have a negative impact on child development and survival. Environmental, genetic, and nutritional factors all have an impact on a child's growth<sup>4</sup>.

Mild and moderate malnutrition make up the greatest portion of malnourished children and account for >80% of malnutrition associated deaths. It is, therefore, vital to intervene in children with mild and moderate malnutrition at the community level before they developed complications<sup>5</sup>.

According to Ayurveda, Lack of food intake in both quantity and quality leads to KuposhanaajanyaVyadhis. Diseases mentioned in Ayurveda like Karshya, Phakka, Balshosha and Parigarbhika can be correlated with malnutrition.

Children's growth and development may be stunted as a result of general Dhatukshaya for a variety of reasons. This Dhatukshaya appears in all three Rogamargas, with PranavahaStrotasa displaying the greatest symptoms. In Kaumarbhrityait is also known by the term Balshosha.

कुमार: शुष्यतिततः स्निग्धश्लक्ष्णमुखेक्षणः ॥

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Acharya Vagbhatahas mentioned that Balshosha is an illness that can be linked to malnutrition, which is one of the disorders that can occur in children due to insufficient nutrition or Dhatuposhana<sup>6</sup>.

Modern mainstay of treatment for MAM is following:-

- 1) Provision of adequate amount of protein and energy ; at least 150 kcal/kg/day
- 2) Nutritious home food.

Although the aforementioned technique carefully assesses hunger, a significant gap exists because no appetite stimulant with proven safety and efficacy in malnourished children is offered by the mainstream medical system. Ayurveda, on the other hand, helps find a solution. Agni Vardhana and BrihanaKalpas are recommended by Ayurveda.

#### CASE REPORT

A 3 yrs old female patient came to balrog opd of government ayurvedic hospital,Osmanabadwith complaints

Not gaining weight ....since 3 months

Not gaining height ....since 3 months

Loss of appetite.... Since 2 months

Generalised weakness

#### H/O PRESENT ILLNESS

A 3 year old female patient brought by her parents for not gaining weight ,height ,having generalized weakness and loss of appetite.Patient took allopathy medications for above complaints, but she did not get satisfactory relief, so she came to Government Ayurvedic College and hospital, Osmanabad for further treatment.

Ashtavidha Pariksha was normal but only mala was asamyak due to irregular bowel habits, jivhawas saam. On Examination, all vitals of the patient were within normal limit. Pulse rate 86 per min regular , Respiratory rate was 28 per min, temperature was 98.1<sup>o</sup>f.

#### H/o past illness

No H/O any major illness.

No significant H/O previous hospitalization or similar illness in family.

#### Birth History

Prenatal- No hx of Oligo/Poly/PIH/Diabetes

Perinatal-FTND BCIAB having Birth weight - 2.3kg.

Postnatal - Not significant.

**H/O Immunization-** All vaccines received upto age as per schedule.

BCG Mark present

#### Dietary history

Exclusive Breast feeding upto 6 months but not sufficient in quality and quantity. In her food history, she was ingesting bakery food products especially biscuits and bread regularly and junk food 2-3 times in a week.Patient was rarely having home made food.Current calorie intake=1157kcal energy against 1500kcal need /RDA (150kcal/kg/day) Current Protein intake= 11 gm against 13 gm need /RDA (1.3/kg/day).

#### EXAMINATION

**Anthropometry-** Height 89 cm, Weight=10 kg, HC -44cm, CC-45cm, MAC-13cm

**General examination-GC-moderate T-98.1 F BP-110/80 mm of Hg RR-28/min HR-86/min**

#### DIAGNOSIS

Present weight = 10 kg Present height=89 cm  
Weight for height=<-2 SD

MAC =13 cm

Thus, Moderate Acute Malnutrition

#### Investigations-

CBC= Hb-9.0 gm%.

WBC-8000/cumm

RBC-3.32x10<sup>3</sup>mL

MCHC-31.40 g/dl.

Sr. Total protein-7.0 gm/dl.

BSL (Random)-102.0 mg%.

Urine (Routine) - Albumin-nil; Sugar-Nil  
(Microscopic)-Pus cells-Nil.

#### Treatment Plan given

Patient is treated by Ayurveda Regimen.The treatment principle were-

- a) Aamapachana,
- b) Agnivardhana and Brimhana
- c) Ahara

Procedure	Medicine	Dose	Duration	Route
Deepan pachan	Lasunadivati	1 tab(125 mg) with luke warm water	for 7days	Oral
Agnivardhana and brimhana	Chaturjatisambharaka	4 gm BD with ghrit	For 28 days	Oral
Ahara	RUTF+otherdietas suggested in Maharashtra Government Nutrition Protocol.		For 28 days	oral

**ASSESSMENT**

1. Anthropometry
2. Abhyavarana shakti
3. CNAQ

**II. OBSERVATIONS**

**Agniparikshana( Abhyavarana Shakti)**

Sr.No.	Particulars	Score
1	Taking food in good quantity twice/thrice a day	0
2	Taking food in moderate quantity twice a day	1
3	Taking food in less quantity twice a day	2
4	Child not taking food at all	3

**Council of Nutritional Appetite Questionnaire (CNAQ)<sup>7</sup>**

**Date:** .....

**Name:** .....

**Age:** ..... **Sex:** .....

**Height:** ..... **Weight:** .....

Administration Instructions: Ask the subject to complete the questionnaire by circling the correct answer and then tally the result based

upon the following numerical scale: a=1, b=2, c=3, d=4, e=5. The sum of the scores for the individual items constitutes the CNAQ score.

CNAQ score <28 or =28 indicates significant risk of at least 5% weight loss within six months.

<p><b>1.Child’s appetite is</b>  a.Very poor  b.Poor  c.Average  d.Good  e.Very <b>good</b></p>	<p><b>2.Food tastes</b>  a.Very bad  b.Bad  c.Average  d.Good  e.Very good</p>
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<p><b>3. When Child eats</b>  a.He/She feels full after eating only a few mouthfuls  b.He/She feels full after eating about a third of a meal  c.He/She feels full after eating over half a meal  d.He/She feels full after eating most of the meal  e.He/She hardly ever feels full</p> <p><b>5.Child feels hungry</b>  a.Rarely  b.Occasionally  c.Some of the time  d.Most of the time  e.All of the time</p> <p><b>7.Compared to when Child was younger,food tastes</b>  a.Much worse  b.Worse  c.Just as good  d.Better  e.Much better</p>	<p><b>4.Normally Child eats</b>  a.Less than one meal a day  b.One meal a day  c.Two meal a day  d.Three meal a day  e.More than three meal a day</p> <p><b>6.Child feels sick or nauseated when he/she eats</b>  a.Most times  b.Often  c.Sometimes  d.Rarely  e.Never</p> <p><b>8.Most of the time child’s mood is</b>  a.Very sad  b.Sad  c.Neither sad nor happy  d.Happy  e.Very happy</p>
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**Anthropometry**

CRITERIA	1 <sup>st</sup> Day	15 <sup>th</sup> Day	30 <sup>th</sup> Day
<b>Height</b>	86 cm	86.5 cm	87.3cm
<b>Weight</b>	10 kg	10.4 kg	10.8 kg
<b>HC</b>	44 cm	44.1 cm	44.3 cm
<b>CC</b>	45 cm	45.1 cm	45.6 cm
<b>MAC</b>	13 cm	13.2 cm	13.5 cm

<b>BMI</b>	13.5	13.9	14.2
<b>Abhyavarana shakti</b>	2	2	1
<b>CNAQ</b>	25	27	29

### III. DISCUSSION

The World Health Organization (WHO) defines PEM as range of pathological condition arising from coincidental lack in varying proportion of protein and calories, occurring most frequent in infants and young children, and commonly associated with infection. The present case was of moderate acute malnutrition. In treating this patient special attention was given to the diet of the patient. The diet of the patient was given according to the need of patient's requirement of protein, calories, also keeping the agni factor in mind.

Faulty lifestyle and dietary habits causes irregular bowel habits which leads to Aamasanchiti (accumulation of Aama), Aamasanchiti leads to obstruction of strotas and slows metabolism, Dhatvahariya rasa which is needed for nourishment of Dhatus is unable to reach them, which leads to their kshayas. As the food is not properly digested it fails to nourish all the body which eventually results in emaciation., Aamapachana causes Agni deepana (enhancement of agni), hence causes proper assimilation of diet and converts into proper form of Dhatus. In this study Aam pachana, Agni deepana and Brimhanachikitsa was given along with proper ahara (diet).

For Aamapachana, lasunadivati was given for seven days. For Agni deepana and Brimhana, Chaturjatadisambharaka was used with ghrith for 28 days

#### Action of lasunadivati

Lasunadivati is useful in Agnimandya, Ajeerna, Visuchika, Udarshoola, Adhmana, Atopa due to the combined action of its ingredients<sup>8</sup>. All the ingredients have Deepana, Paachana, Shoolahara and Vatanulomana action. It alleviates

the Vata, Kaphadoshas and improves the Pitta dosha. It also improves Agni and reduces Aama in the body.

#### Action of Chaturjatadisambharaka<sup>9</sup>

According to Bharatbhaisajyaratnakar Chaturjatadisambharaka is ajirna-kasaghana, shwasaghana, balanamangavardhanam, sarvarogharam, balpushtikar. The contents are Chaturjata (twak, ela, tejpatra, nagkeshar), talispatra, kustha, trikatu (sunthi, marich, pippali), chavika, pippalimoola, tavakshira, jeeraka, ashwagandha, khand. Most of the ingredients of Chaturjatadisambharaka are Katu- Tiktarasatmaka & Katuvipaki and have deepana, pachana properties which pacifies kapha, clears strotasavarodha, helps to increase & maintain proper function of Agni. Ingredients like Tavakshira is having Madhurarasa, Madhuravipaka and Sheetavirya which pacifies Vata. Content Ashwagandha is Madhurvipaki and possesses rasayana properties, whereas Khand is "Balakruta". All of these three are balya, brimhaniya helps in poshana of Dhātu by virtue of its properties.

Ahara (Dietary Management) is a crucial component to take into account in cases of moderate acute malnutrition, but appetite still has the final say in how well one digests. This hunger is entirely dependent on the Agni, the digestive fire, which transforms the food consumed into different structural and functional components of energy. The management process includes nutritional restoration using high-energy foods. An energy-dense, vitamin- and mineral-enriched diet called "Ready to Use Therapeutic Food" (RUTF) has significantly improved management of Moderate acute Malnutrition.

Sr.no.	Composition	
1	Peanut paste	30%
2	Sugar	29%
3	Milk Solids	20%
4	Vegetable oil	18%
5	With added mineral mix	

Total protein per 100 gm 15 gm  
Total Calories per 100g 543 Kcal

This was administered in accordance with the patient's needs. The regular diet high in calories and protein was also maintained for palatability and to keep patient interested in food.

#### IV. CONCLUSION

When a child is undernourished, their body physiology adapts in a reductive way, which slows down how well their body systems function. He needs to gradually increase his intake of calories, proteins, and other important elements. Food digestion is wholly dependent on appetite and the body's capacity for digestion. It is referred to as Agni in Ayurveda. Agni, or digestive force, is crucial for maintaining a person's nutritional balance. The digestive system, or Agni, transforms the food consumed into numerous structural and functional energy constituents. This case of severe acute malnutrition focuses on and finds that Agni Chikitsa continues to be the cornerstone of treatment even in the paediatric population, despite diets being provided systemically and being high in protein and calories. As Agni, or digestive strength, enhances metabolism, the gut is prepared to assimilate a meal high in protein as well as medications. This Ayurvedic routine aids in boosting Agni, or digestive fire.

#### REFERENCES

- [1]. Vinod K Paul, Arvind Bagga, Ghai Essential Pediatrics-9th Edition, CBS Publishers & Distributors Pvt Ltd Mumbai; 2019:93
- [2]. Robert M. Kliegman, Nelson textbook of Pediatrics, Elsevier India Private Ltd. New Delhi, Chapter 46th – Nutrition, Food Security, and Health, Nineteenth Edition Reprinted 2014, p:301
- [3]. Aruchamy Laxamaswamy, Clinical Paediatrics, History taking and case discussion, 4<sup>th</sup> Edition, Chapter 5 - Nutritional Disorders, Wolters Kluwer publication, Page no.196.
- [4]. KE Elizabeth, Nutrition and Child Development, 4<sup>th</sup> edition, section 4 – triple burden of malnutrition.
- [5]. Vinod K Paul, Arvind Bagga, Ghai Essential Pediatrics-9th Edition, CBS Publishers & Distributors Pvt Ltd Mumbai; 2019:93
- [6]. A.M.Kunte, Ashtanga Hridaya- with Sarvangasundara commentary of Arunadatta and Ayurvedarasyana commentary of Hemadri, edited by Pt. Hari Sadasiva Sastri Paradakara Uttarasthana 2/45, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint 2015:p.784
- [7]. Wilson M, Thomas D, Rubenstein L, Chibnal JJ, Anderson S, Baxi A et al. Appetite assessment: Simple Appetite Questionnaire predicts weight loss in community-dwelling adults and nursing home residents.
- [8]. M. Sakarge, V. Pandey et al, "Conceptual review on Agnimandya w.r.t. Ajeerna (Indigestion) and its Ayurveda Management", Journal of Ayurveda and Integrated Medical Sciences, (ISSN 2465-3110), 2020; 5(1): 191-193.
- [9]. Shree Vd. Gopinath Bhishagratna, Bharat Bhaisajyaratnakar, Part 2, Chakaradichurnaprakarnam 1713/146, B. Jain Publishers Pvt. Ltd, New Delhi