

A CASE STUDY ON EFFICACY OF SAMVARDHAN GHRITAM IN UNDERWEIGHT CHILDREN

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ABSTRACT

Undernutrition is known to be a major health risk for developing countries all over the world. An estimated 21% of all impairments worldwide and 35% of fatalities among children under the age of five are attributed to childhood undernourishment. The nutritional status of children is a sensitive indicator of the health and nutrition of a community. The state of underweight caused by malnutrition is mainly referred to as "karshya". Malnourished patients have weakened immune systems and are more prone to disease. Ayurveda places more emphasis on prevention than primarily treating symptoms. *Karshya* is known as *Aptarapanajanaya Vyadhi* in Ayurveda. According to Ayurvedic literature, two major predisposing features that are vital to the etiology of *Karshya* are *Alpasana* and *Vishamasana* (false habit of intake). Vata and Agni function changes result in inadequate. Classical Ayurvedic texts mention treating *Karshya* using *Nidana-Parivarjana*, *Mridu Samshodhana*, *Shamshamana*, *Laghu Santarapana*, and medications that are predominant in *Madhura Rasa*. *Samvardhana Ghritam* has been chosen as a drug for the management of *Karshya*.

KEYWORDS: Ayurveda, *Karshya*, Agni, Vata, *Samvardhana Ghritam*.

INTRODUCTION

A condition known as malnutrition occurs when there is a relative, total, or excess of one or more necessary nutrients. It covers imbalance, overnutrition, undernutrition, and specific deficiencies. Micronutrient deficiencies and protein energy inadequacy are the two main categories of malnutrition. Weight in kilograms divided by height in meters (BMI), waist and hip ratio, and mid-upper arm circumference are used to measure undernutrition.^[1]

Acharya Charaka says that overly lean (*Karshya*) and overly obese (*Medasvi*) people are included in the eight categories of vile people (*Ashtau-ninditiya*). The buttocks, belly, neck (*Shushka-sphic*, *Udar*, *Greeva*), conspicuous vascular network (*Dhamanijala santataha*), remnants of skin and bone (*Twagasthi shesho*, *Ati krisha*), and thick nodes (*Sthola parva*) have all dried up in an overly lean individual (*Karshya*).^[2] *Acharya Shushruta* states that *Rasa-dhatu* determines whether a body is fat or lean.^[3] *Karshya* may be associated with a potential undernutrition or deficiency of protein and energy. Growth retardation, insufficient immunity to diseases, and numerous other health issues are caused by malnutrition or inadequate nutrition. The World Health Organization states that malnutrition is a worldwide issue

that negatively impacts population group advancement, health outcomes, and survival.^[4] In nations with little resources, like India, the repercussions are severe.

India is a developing nation where population growth, poverty, ignorance, and lack of education are the main issues that prevent many children from receiving food on a daily basis. They yearn for food and lack a place to dwell. *Karshya* is hence frequently observed in several children.

Undernutrition is closely linked to lower adult height, worse educational attainment, lower economic productivity, and lower birth weight in female children. Diabetes, hypertension, and dyslipidemias in adults are risk factors for low birth weight and undernutrition in childhood.

MATERIALS AND METHODS

Basic Information of Patient

- Name: Kalpana (Not real name)
- Age: 2.5 years
- Sex: Female
- Address: Rishikesh (Uttarakhand) India
- Socio-Economic Status: Lower-Middle class

Presenting Complaints: A girl child of 2.5 years of age came to OPD with her mother with the complaints of poor appetite, poor weight and height gain, irritability and reduced physical activity since last 6 months.

History of Presenting Complaints: According to patient's attendant patient was asymptomatic before 6 months. Then she gradually started getting irritable followed by poor appetite, further leading to poor weight and height gain. She often gets fatigue during physical activity. Patient had taken treatment for this but no improvement was seen. With these complaints, patient approached to our hospital on 2nd August 2023 for further management.

Past Medical & Surgical History: Typhoid (-), TB (-).

General Examination

GC: Average
Build & Nutrition: Not good
Pallor: Mild pallor seen
Cyanosis: Absent
Clubbing: Absent
Lymph Node: Not Enlarged
Hairs: Dry, thin hairs
Scalp: Normal
Skin: Dry
Nails: Pale colored

Anthropometry

Weight: 10.2 Kgs Expected weight: 13kgs
Height: 82cms Expected height: 92cms
MUAC: 11.6cms Expected MUAC: > 12.5cms
H.C.: 48cms
C.C.: 54cms.

Vital Signs

Temperature: 97.1⁰F
Pulse Rate: 82/min
Respiratory Rate: 24 /min
SpO₂: 98%

Birth History

Antenatal History: Uneventful
Natal History: Full term normal vaginal delivery of 2.8 kgs birth weight and immediate cried after birth.
Post Natal: not any history of jaundice, fever and convulsions.

Development History: Appropriate for age

Immunization History: Done till date (as per UIP)

Dietary History

Type of diet: Mixed
Qualitative: Vegetables, Pulses, Rice, Milk, Chapati.
Quantitative: milk 150ml twice a day and 1/2 bowl Pulses or vegetable with rice, 1chapati in a day and sometimes fruits.

Family History

No H/O consanguineous Marriage

Nuclear Family

No. of Siblings: 01 (1yr and 2 months old Younger brother- healthy)

Personal History

Appetite: Reduced
Bowel Habit: Regular
Consistency of Stool: Wellformed
Micturition: Day- 3-4 times; Night 1-2 time
Physical Activity: Sedentary
Sleep: Sound
Addiction: Not any

Systemic Examination

Systemic examination showed that all the systems are within normal limits.

Investigations

Hb: 10.9 gm/dL
T.L.C.: 10,000/ mm³
D.L.C.: N-57%, L-35%, E-2%, M-6%, B-0%.
ESR- 10mm in first hr.
Serum Protein :5.8 gm%
Serum Albumin: 3.5 gm%
Serum Globulin: 2.3gm%
A:G ratio: 1.52
LFT: Serum Bilirubin: Total: 0.5 mg%;
Direct:0.3mg%

Astavidha Pariksha

Nadi: Vata pradhan
Mutra: Pitabh
Mala: Niram
Jivha: Alipta
Shabda: Spastha
Sparsha: Ruksha, Samsheetoshana
Drikka: Samanya
Aakriti: Krisha

Dashvidha Pariksha

Prakriti: Vata pradhana kaphapittaj
Vikruti: Dosha- Vataj; Dushya- Rasa, Mansa & Meda
Sara: Madhyam
Samhanan: Madhyam
Pramana: Madhyam
Satmaya: Madhyam
Satva: Madhyam
Aaharshakti: Abhyavaran Shakti: Avara; Jaran Shakti- Avara
Vyayamshakti: Avara
Vaya: Annada avastha

Samprapti Ghataka

Dosha: Vataj
Dushya: Rasa, Mansa, Meda
Srotosa: Rasavaha, Mansavaha & Medavaha
Adhithana: Sarva Sharira
Srotodushthi: Sanga
Agni-Dushti Prakara: Vishmagni

Diagnostic Parameter

Parameter	Grade (0)	Grade (1)	Grade (2)	Grade (3)
Daurbalya (Weakness)	Very Active	Active	Reduced Activity	Marked reduced activity
Aruchi (Loss of Appetite)	Normal diet intake, child himself ask food	Child ask for food but not take adequately	Reluctant to food	Reluctant to food considerably even by force
Mandchestha (Reduced Physical Activity)	Full active and playful	Playful on active commands	Less playful	Lethargy
Dhamani Jaal Darshana	Not visible easily	Visible on pressure	Visible without pressure	Visible & prominent without pressure
Shushyati (Poor Weight Gain)	Weight as expected to age	Weight >80% of expected weight	Weight b/w 80%-70% of expected weight	Weight b/w 70%-60% of expected weight
Krodhi (Irritability)	No irritability only	Irritable with reasonable cause only	Irritable without reasonable cause	Irritable without reasonable cause & cannot be helped by parents counselling
Sthoola Parva	Deeply seated with extra fat	Covered	Prominent	Relatively look larger

Final Diagnosis: *Karshya* (Underweight)

Assessments: 4 assessments at an interval of 15 days
Follow ups: 2 follow ups at an interval of 15 days without medicine

Treatment Protocol

Drug given: *Samvardhana Ghritam*
Dose: 1.5ml *Ghritam* with 7 drops Honey.
Duration: 60 days

Route of Administration: Oral route
Sahpaana: Madhu

ONSERVATION

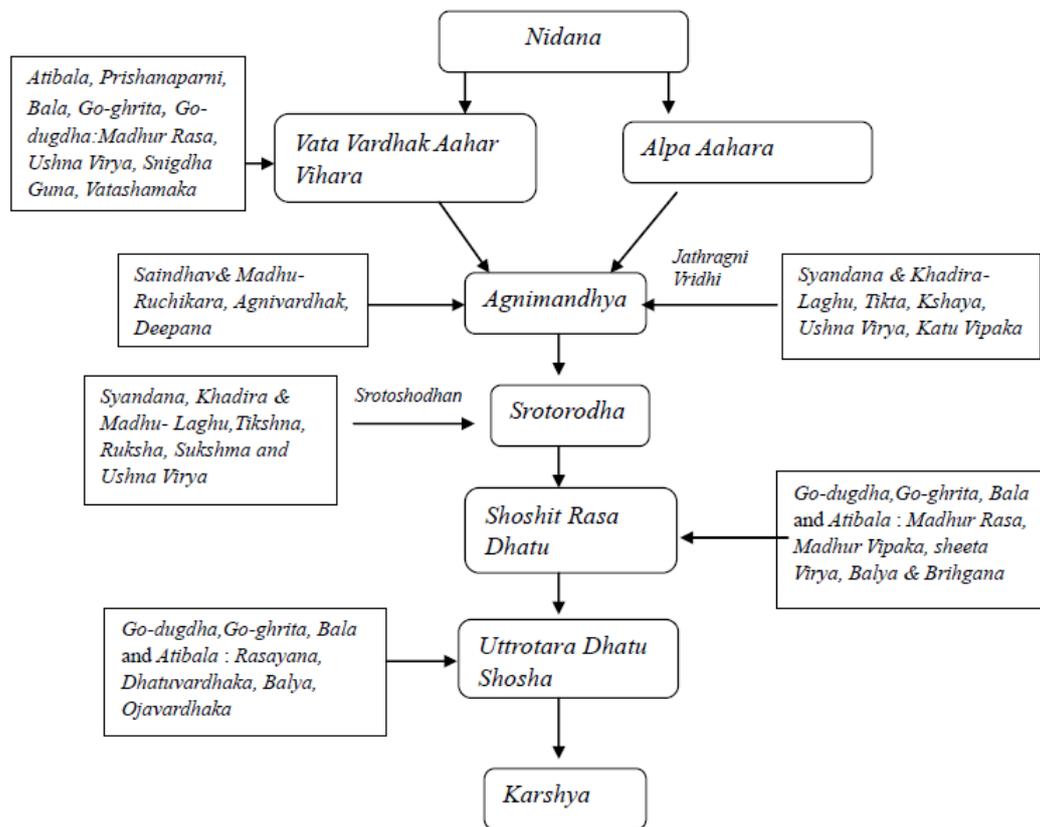
Evaluation of patient for 60 days on the basis of following parameters

Sr. No.	Target Symptoms	During Trial					A.T. 15 th and 30 th day
		Base Line	15 th day	30 th day	45 th day	60 th day	
1.	<i>Daurbalya</i> and <i>Mandchestha</i>	3	3	2	2	1	1
2.	<i>Aruchi</i>	2	2	1	1	0	0
3.	<i>Dhamni Jaal Darshan</i>	1	1	1	0	0	0
4.	<i>Shushyati</i> (Poor Wt. Gain)	1	1	1	1	0	0
5.	<i>Nidra</i>	0	0	0	0	0	0
6.	<i>Sthoola Parva</i>	1	1	1	1	0	0
7.	<i>Mala Vibandhata</i>	0	0	0	0	0	0
8.	Weight for age (kgs)	10.2	10.5	11	11.6	12.2	12.5
9.	Height for age (cms)	82	82	84	84	85	85
10.	Mid arm circumference (cms)	11.6	11.6	11.8	11.8	11.8	12
11.	Body Mass Index (kg/m ²)	15.2	15.6	15.7	16.5	16.9	17.3
12.	Hb%	10.9 gm/dL	-	-	-	11.5 gm/dL	-

DISCUSSION

The patient is observed for 60 days with above *ayurvedic* management on the basis of grading of taken parameters and following observations are seen. There is gradual improvement in weight gain along with marked improvement in appetite. There is improvement in her behavior seen by her parents. A marked improvement was achieved in her fatigue during physical activity.

PROBABLE MODE OF ACTION OF DRUG



The main cause of *Karshya* is *Vatavardhaka Aahar Vihara* and food intake in less quantity. These causes further decrease the digestive fire i.e. *Agnimandhya*. This *Agnimandhya* forms *Ama* in body channels and causing their obstruction which is called *Srotorodha* in *Ayurveda*. This *Srotorodha* dry up the *Rasa Dhatu* (*upshoshit Rasa dhatu*) which further debilitate progressive *Dhatu*s and cause *Karshya*.

Samvardhan Ghrita acts upon this process and relieves *Karshya*. The properties of the *Ghrita* like *Madhura Rasa*, *Ushna Veerya*, *Snigdha Guna* of *Prishanaparni*, *Saindhav*, *Bala*; *Karma* like *Vatashaman* of *Atibala*, *Prishanaparni*, *Bala*, *Go-ghrita* and *Go-dugdha* decreases *Vatavridhi*. To increase depleted *Agni* properties like *Laghu Guna*, *Tikta* and *Kashya Rasa*, *Ushna veerya*, *Katu Vipaka* of *Syandana*, *Khadira* and *Karma* like *Agnivridhi*, *Deepana* and *Roochikara* of *Saindhav* increases digestive fire (*Jathargani Vridhi*). Other properties like *Laghu*, *Teekshana*, *Rooksha*, *Sookshma Guna* and *Ushna veerya* and *Raktashodhaka* property of *Khadira* and *Syanadana* opens obstructed channels and *Madhura Rasa*, *Madhura Vipaka* and *Sheeta Veerya* along with *Balya* and *Brihgana* property of *Go-dugdha*, *Go-ghrita*, *Bala* and *Atibala* increase depleted *Rasa Dhatu*. Progressive *Dhatu*s are nourished by *Rasayana*, *Dhatuvardhaka*, *Balya*, *Ojavardhaka* properties of *Bala*, *Go-dugdha* and *Go-ghrita*. All these actions may remove the causative factor of the *Karshya* and might have increased the weight and height.

CONCLUSION

After clinical assessment for 60 days with *Samvardhan Ghritam* patient got relief of about 90%. Improvement was seen in all subjective and objective parameters. Properties of the *Samvardhana Ghritam* mentioned above might have acted upon various steps of the disease and relieves *Karshya* and helped in increase in weight and nourishing the body.

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