

ROLE OF SNEHANA IN THE MANAGEMENT OF PROTEIN ENERGY MALNUTRITION IN CHILDREN

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ABSTRACT

Protein energy malnutrition is a major public health problem in India that affects children in their crucial period of growth and development. Only supplementation of food items is not sufficient but many other things also play an important role in its management. Understanding the root cause of PEM, *Prakriti*, *Dosha*, *Dushya* etc. of the patient, following dietary rules described in *Ayurveda* are also important for its management. PEM can be correlated with *Karshya roga*, *Balshosha*, *Parigarbhik*, *Fakka roga* in *Ayurveda*. *Sneha* and *Snehana chikitsa* which is a part of *Shadopakram* play an effective role by its *Deepan*, *Santarpan*, immunobooster, calorie enhancer and anti-infective properties.

Keywords: *Snehana*, PEM, Protein Energy Malnutrition

INTRODUCTION

Protein Energy Malnutrition (PEM) or Protein Energy Under nutrition is a major public health problem in India that affects children in their most important period of growth and development. According to UNICEF the rate of malnutrition remains alarming, stunting is declining too slowly while wasting still impacts the lives of too many young children¹.

More than one third of the world's malnourished children live in India, among these, half of them under three years of age are underweight². It is measured in

terms of low weight for age, stunting and wasting. It commonly occurs in infants who are born in malnourished backgrounds and in pre-school children due to-

- Low nutritional reserve especially premature
- Poor nutritional status of the mother producing low birth weight child. Low birth weight baby is susceptible for infections which further lead to poor weight gain. This vicious cycle ultimately run and aggravate the condition.

- High BMR for their size
- Higher requirement for the growth
- High incidence of infections due to poor immunity

PEM produces wide spectrum of changes from invisible to mild to severe including marasmus and kwashiorkor. The young child tries to adapt physiologically to the state of malnutrition, if not managed ends with pathological dysadaptation. It is not only an important cause of childhood morbidity and mortality but also leads to permanent impairment of physical growth and possibility of ill mental growth of those who survive.

PEM IN AYURVEDIC ASPECT

Protein Energy Malnutrition generally comes under *Apatarpanjanya vyadhi* in Ayurveda. Based on severity and etiology it can be correlated with

- *Karshya roga*³.
- *Balshosha*^{4,5}.
- *Parigarbhik*⁶
- *Fakka roga*⁷

The whole range of pathological conditions arising due to lack of protein and calories, commonly associated with infection comes under these conditions.

AETIOPATHOGENESIS OF PEM

Main causes of PEM are:

- Poverty or poor socioeconomic status
- Ill maternal health, low birth interval
- Faulty feeding habits
- Infections
- Malabsorption
- Iatrogenic

According to Ayurvedic texts the main causes are

- *Aptarpanjanya ahar vihar* such as *ruksha*, excessive intake of *Kashaya*, *Katu*, *Tikta dravya*, *alpabhojana*, *pramitashana*, *anashana*, *langhana*, *malamutradinigraha*, *atikrodha*, *atibhaya*, *vatasevana*⁸

- *Shlaishmika stanya sevana*, excessive sleep and *Shitambu* causes *Balshosha*⁵. These factors cause *srotorodha* in *rasavahi srotos*.
- *Anath balak*, *stanyadustui*, *garbha* and *vyadhi* causes *fakka roga*⁷
- If baby is on breast milk of pregnant women then *parigarbhika roga*⁶ can occur.
- Feeding of *vata dosha* vitiated milk especially *vairasya stanyadusti*. This type of vitiated milk is not tasty, after feeding it infant doesn't gain weight properly becoming emaciated⁹.

PRINCIPLE OF MANAGEMENT ACCORDING TO AYURVEDA

- *Laghu cha santarpana chikitsa*¹⁰. The medication or the food items that are easy to digest and nourish the body are more beneficial.
- *Agni deepan chikitsa*¹¹ drugs which increase digestive power.
- *Shrotoshodhak chikitsa* because in various cases of nutritional disorder *srotorodha* is an important cause⁵.
- *Initiation of milk-based diet in starting or aushadh siddha ksheer*⁷
- *Jeevaniya*, *balya* and *brimhana chikitsa*¹²
- *Santarpana chikitsa* focuses on 2 ways- correction of *Agni* and nourishment of *Dhatus*. *Sarpi* (ghee) possess both qualities and when *sanskarit/medicated* with other drugs can pacify all vitiated *dosha*.
- Use of dietetic rules (*ahara vidhi vidhan*) as prescribed in *Ayurveda*.

WHAT IS SNEHANA

Use of *sneha* externally or internally to the body is called *Snehana*. It imparts softness and removes dryness of the body. It also comes under *shada upakrama*¹³ and is a method of *purvakarma* which is essential before *shodhana karma* (detoxification therapy).¹⁴ It helps to move the *dosha* from *shakha* (*dhatus*) to *koshta* (GIT) and can be excreted from their nearest route of excretion. Acharya Charaka defines *Snehana* as the process which

produces *sneha*, *vishyanda*, *mardava* (softness) and *kleda* in the body¹⁵. Acharya Chakrapani attempts to elucidate the meaning of *vishyanda* as *vilyana* i.e. solubility¹⁵. According to acharya Sushruta, *sneha* is the *sara* (essence) of the human body and *bala* depends upon the *sneha of body*¹⁶.

Internal Snehana

Sneha pacifies the *Vata Dosha*, softens various body organs and helps in disintegrating the cumulated *Dosha* or *Mala*¹⁷. *Sneha* brings the cumulated *Dosha* from *Shakha* (*dhatu*) to *Koshtha* (*mahasrotas*) for their easy removal just like water rinses out smoothly as on an oil applied utensil. *Dosha* also rinse out easily in the *Snigdha* body. *Snehana* liquefies the *dosha* sticking in the *srotas* and brings it to *Koshta* ensuring proper circulation of *Vata*. Appropriate use of *snehana* produces^{18,19,20}

- *Deeptagni* (improves digestion)
- *Parishudha koshta* (purifies gastro- intestinal tract)
- *Pratayagra dhatu* (renovation of body tissues)
- *Bala* (improves body strength)
- *Varna* (improvement of skin texture)
- *Mandajara* (delay ageing)

External Snehana

The Sanskrit word *Sneha* denotes both *Sneha dravya* (*taila*, *ghrita*, *vasa*, *majja*) and love. The effects of *Abhyanga* are similar. The Properties of *Abhyanga* as per Ayurvedic texts are-

1. *Jaraahara*: *Abhyanga* counteracts the aging process.
2. *Shramahara*: *Abhyanga* helps in relaxation of the tensile muscles.
3. *Vatahara*: *Abhyanga* is done with *sneha dravyas* which are having potent *Vatashamaka* properties.²¹
4. *Drishti prasadakara*: *Abhyanga* especially pada *abhyanga* or foot massage improves quality of eye sight.²²
5. *Pushtikara*: *Abhyanga* nourishes various *dhatu*s.²¹
6. *Ayushyakara*: *Abhyanga* increases lifespan.

7. *Swapnakara*: *Abhyanga* relaxes the body and mind so helps in inducing sound sleep.
8. *Twak dandhyakara*: *Abhyanga* makes skin intact and maintains its healthy status.²¹
9. *Klesha sahatva*: It induces strength in body, making it adaptive for all types of condition. It increases its tolerance towards various external agents.
10. *Abhighata sahatva*: Persons who regularly do *Abhyanga* are not affected much by any type of trauma.
11. *Kapha-Vata nirodhana*: Sushruta says that *Abhyanga* pacifies both *Kapha* and *Vata*.
12. *Mrujavarna balaprada*: *Abhyanga* improves complexion of body and increases its strength. *Tvacha* is a seat of *sparshanendriya* and it is obvious that *abhyanga* also pacifies vitiated *Vata dosha* in *tvacha*. *Bhrajaka Pitta* located in the skin which imparts the characteristics of color and luster, so it is termed as *Bhrajaka*. Acharya Charaka has mentioned that the production of normal and abnormal temperature of the body as well as the normal and abnormal color of the skin is due to *Pitta*.

Massage increases circulation, especially to nerve endings and tones up muscle endings. Toning of the muscles induces strength in weak muscles. Massage act as calming for the nerves, lubricates the joints ensuring proper movements of body parts, increases mental alertness, improves in elimination of impurities from the body. Massage or touching has been found to increase the secretion of growth hormone²³

SNEHA PRAVICHARANA

Sneha can be used in various forms of meal, *leha*, *abhyanjana* which are known as *sneha pravicharna*. According to Acharya Charak these are of twenty-four types whereas Acharya Kashyapa describes only twenty types. Acharya Kashyapa also added three specific modes of *pravicharna* namely *urdava karma*, *adho karma* and *peya*. Different type of formulations can be applied according to *oak*, *ritu*, *roga* and *purusha satmya*.

Pure form of ghrta/oil is the *Achha peya sneha* which is the main form of instant oleation. *Sneha Pravicharna* is easily acceptable hence it may be beneficial in person who dislike sneha (*sneha dweshi*), *nitya sneha*, *mridu koshttha*, *madya nityam*, *sukumar*, *krish*, *vridhdha balaka*, *trishnalu*, *ushna kala*.

ROLE OF SNEHANA IN PEM

Probable mode of action can be described as:

- *Agnideepan* activity
- Act as *shodhana* (purifying agent). There is excess production of mala in the body of malnourished child.
- Maintains integrity of epithelial surfaces in the body.
- Having more calories than other food items gives adequate energy.
- Helps in absorbing fat-soluble A, D, E, and K vitamins
- Palatability
- Prevents body from hypothermia
- *Santarpana* activity
- As free radical scavenger
- There is least chance of arising oedema by the use of *ghrita* such as *Bramhi grita*, *kalyanak ghrta*, *shatapala ghrta* or *samvardhan ghrta* in the management of PEM because *ghrita* also act as mild diuretic. After digestion it dissociates into fatty acid and glycerol which act as mild diuretic so there is no chances of complications such as pseudotumor cerebri like symptoms during the management of PEM.
- It acts as solvent or vehicle so that medicine or nutrients can be administered easily in children.

Acharya *Kashyapa* mentioned use of *ghrita* especially in younger age especially upto to the age of eight month showing its importance in that age group²⁴.

COMMONLY USED SNEHA IN CASE OF NUTRITIONAL DISORDERS

- *Bramhi ghrta*⁷
- *Kalyanak ghrta*⁷
- *Amrita ghrta*⁷

- *Samvardhana ghrta*⁷
- *Coconut oil*

As oil supplementation for PEM, coconut oil is found to be most effective compared than other oils due to is better absorption as it contains medium chain fatty acids and has low omega-6 to omega-3 fatty acid ratio.²⁵

- *Raj tail*⁷ used for massage
- *Vyoshadya ghrta*²⁶

CONCLUSION

Protein energy malnutrition is a common disorder in developing countries that affects children in their crucial period of growth and development. It can be correlated with *Karshya roga Balshosha*, *Parigarbhik*, *Fakka roga*. The root cause of PEM is poverty, faulty dietary habits, *grahani dosha* and infections. Ayurveda and its dietary principles play an important role in the management of PEM. *Sneha* and *Snehana chikitsa* which is a part of *shadopakram* possesses *deepan*, *santarpan*, immunobooster, calorie enhancer and anti-infective properties. Thus, *Snehana* can be useful in management of PEM.

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