

Ayurvedic Nutritive Powder as a Complementary Food: A Drug Review

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Abstract— In Infants, initially there is a need of only breast milk, or a suitable formula milk, but as they get older, they need to have other sources of nutrition to help with growth and development. In the first year of a child, development takes faster than at any other time in his or her life. In this period children need a lot of energy and nutrients for growth as well as protection from various diseases. Balanced and nutritious diet not only protect the child's health but also reduces the burden of family suffering. Mortality rate associated with respiratory infections, diarrhea, malaria, measles, and other infectious diseases gets augmented if the child is malnourished. A good, nutritious and balanced diet helps to protect and release the family from sickness. If the child is malnourished then mortality risk associated with respiratory infections, diarrhea, malaria, measles, and other infectious diseases also increases. So there is need of a nutritious food in infant age group. The Ayurvedic nutritive powder is rich in carbohydrates, iron, protein and calcium. Hence it can be used as complementary food in infants.

Keywords— Complementary food, malnourishment, carbohydrates, Ayurvedic nutritive powder.

I. INTRODUCTION

In Infants, initially there is a need of only breast milk, or a suitable formula milk, but as they get older, they need to have other sources of nutrition to cope up with growth and development. Weaning i.e. Complementary feeding is the introduction of 1st semisolid foods to the baby who is on breast milk. [1] The first year, a child development grows faster than at any other time in his or her life. This period children's need a lot of energy and nutrients to they can grow well as well to protect us from various diseases. Malnutrition is the most widespread health and nutritional problems of the developing countries, including India. A good, nutritious and balanced diet helps to protect and release the family from sickness.

A nutritious diet is not just available from expensive foods but it can be prepare from easily available ingredients in home.

If the child is not getting required amounts of nutrition it may fall prey to malnutrition and anemic conditions. If the child do not getting the needed amounts of the necessary nutrition then they can be land in to the malnutrition and anemia. If a child is malnourished, the mortality risk associated with respiratory infections, diarrhea, malaria, measles, and other infectious diseases is increased. [2] Babies under five years, children, pregnant women and lactating mothers are especially at risk from poor nutrition. Hence *Ayurvedic Nutritive Powder* is the good alternative Complementary food during weaning period

TABLE I. Composition of Ayurvedic nutritive powder

Sr. No.	Sanskrit Name	Latin Name	Family Name	Part Used
01.	Mudga ^[3]	<i>Phaseolus radiates</i> Linn.	Fabaceae	Seeds
02.	Godhum ^[4]	<i>Triticum sativum</i> Linn.	Gramineace	Seeds
03.	Rakta shali ^[5]	<i>Orvza sativum</i> Linn.	Poaceae	Seeds
04.	Ragi ^[6]	<i>Eleusine coracono</i> LGaerth.	Poaceae	Seeds
05.	Shunti ^[7]	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Rhizome
06.	Marich ^[8]	<i>Piper nigrum</i> Linn.	Piperaceae	Fruits
07.	Pippali ^[9]	<i>Piper longum</i> Linn.	Pieraceae	Fruits
08.	Yasthimadhu ^[10]	<i>Glycyrrhiza glabra</i> Linn.	Leguminosea	Roots
09.	Khandsharkara	-	-	-

II. METHOD OF PREPARATION

1. Mudga, Godhuma, Rakta shali, Ragi, were taken separately, cleaned and washed under running water separately.
2. Excess water was removed by straining and shade dried by spreading on clean white cotton cloth.
3. Completely dried ingredients were roasted separately on mild flame till they get roasted well and become fragile.
4. Roasted ingredients were powdered separately in a mixer grinder and sieved through sieve number 80.
5. Shunti, maricha, Pippali, Yastimadhu and Khanda sharkara were powdered separately and sieved through sieve number 80.
6. Powdered drugs were taken together in mixer grinder and ground till homogenous mixture was formed and stored in a clean air tight container.

TABLE II. Results of organoleptic characters of NP

No.	Parameter	Ayurvedic Nutritive Powder
01	Touch	Soft
02	Color	Grayish Brown
03	Taste	Sweet
04	Odor	Aromatic

Anupana: it can be given with *Godugdha* as well as with *ghee*

Method of administration:

1. Follow 6 steps while washing hands.
2. Both hands should be dried after washing.

3. The person should not touch any articles there upon.
4. Should follow aseptic precautions.
5. Nails of the person should be cut.
6. Persons hands should be free from any sort of skin disorder.
7. Take prepared homogeneous mixture of *Ayurvedic nutritive powder* as per dose.
8. Then mixed with milk homogeneous and then give it to the child for drink.
9. Person should be calm.

TABLE III. Pharmacodynamics of drugs

Sr.No.	Drug Name	Rasa	Guna	Veerya	Vipak	Karma
01.	<i>Mudga</i> ^[11]	<i>Madhura, Kashaya</i>	<i>Laghu, Ruksha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Balya, jvaraghna Grahi, netra-varnya pathya</i>
02.	<i>Godhum</i> ^[12]	<i>Madhura</i>	<i>Guru, snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Jeevaniya, balya, brumhaniya</i>
03.	<i>Rakta shali</i> ^[13]	<i>Madhura, Kashaya</i>	<i>Laghu, snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Hadya, ruchikara, bramhan, mutral</i>
04.	<i>Ragi</i> ^[14]	<i>Madhura</i>	<i>Snigdha</i>	<i>Sheeta</i>	<i>Katu</i>	<i>Balakaraka</i>
05.	<i>Shunthi</i> ^[15]	<i>Katu</i>	<i>Laghu, snigdha</i>	<i>Ushna</i>	<i>Madhura</i>	<i>Deepen, pachan hyadya anuloman</i>
06.	<i>Marich</i> ^[16]	<i>Katu, tikta</i>	<i>Laghu, Ruksha, Snigdha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Deepen pachan krumighna vatanuloman</i>
07.	<i>Pippali</i> ^[17]	<i>Madhura, katu, tikta</i>	<i>Laghu snigdha</i>	<i>Anushna</i>	<i>Madhura</i>	<i>Deepen pachan rasayan balya</i>
08.	<i>Yasthimadhu</i> ^[18]	<i>Madhura</i>	<i>Guru snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Balya jeevaniya vrushya</i>
09.	<i>Khandsharkara</i>	<i>Madhura</i>	<i>Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>	<i>Balya veerya vardhak</i>

TABLE IV. Results of Quantitative analysis^[19] of *Ayurvedic Nutritive powder*

Sl. No.	Test Parameter	Units of Measurement	Test Result
1.	Carbohydrates	%	81.8
2.	Protein	%	12.12
3.	Iron as Fe	mg/Kg	74
4.	Calcium as Ca	mg/Kg	841

III. PROBABLE MECHANISM OF ACTION

Mudga is best among all *shimbi dhanyas*,^[20] which is rich in proteins, possesses *laghu guna, grahi karma* with *balyavardhak*. It is also known as *pathya* i.e. wholesome diet. *Godhuma* having *Jeevaniya, Ruchikara* and *Bramhana* Properties. It has also *balakaraka, sandhankar, rasaraktadi vardhak* and gives fairness. *Raktashali* is the best in the *shali dhanya*^[21] and having properties like *tridosahara*. It is rich in Iron, Carbohydrates. *Ragi* is rich in calcium. *Trikatu* was included as it is a *deepana dravya*, for the treat *mandagni* in case of prevalent *Kapha Pradhana*. *Yasthimadhu* itself indicated *medhya* drug so known as effective in the improvement of neuro-pharmacological activity as well as improvement intelligence and memory. In the *Ayurvedic nutritive powder* having carbohydrates 81.8%, protein 12.12% iron 74mg and calcium 841mg per kg. Hence it can be fulfill the requirement of nutrition to the infant in the weaning period.

IV. CONCLUSION

Ayurvedic Nutritive Powder can be used as weaning food in infants. The *Ayurvedic nutritive powder* is rich in carbohydrates, iron, protein and calcium. It is easy to prepare as well dispense because It is in *choorna* form. *Ayurvedic nutritive powder* contains *khanda Shakara* which is palatable for infant age group. It can be used in pediatric practice those

are weaning infants. The powder contains *Trikatu*, which is good *pachan* (digest) drug. The 80% of infant brain growth occur in first two year of life. So, during this period required good quality of diet required in this period which is full fill the requirement of infant. And the *Ayurvedic nutritive powder* is provide carbohydrates, protein, and iron. Hence it can be used as complementary food in infants.

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