

NUTRITIONAL STATUS OF TRIBAL LACTATING HEAVY WORKING WOMEN

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Food and nutrition is a basic need of human beings in a wide spectrum, every living organism. It consists of six major categories namely carbohydrates, proteins, fats minerals, vitamins and water, their main function is to supply energy for work and exercise, build and repair body tissues and finally protecting the body from infection and regulating body process.

Women are backbone of human beings in carrying out the life processes by giving birth to a child through pregnancy and nurturing them through lactation. Pregnancy is a physiological condition and a gift of nature that a tiny speck of fertilized ovum grows to a healthy body of about 2.5 to 3 kg. in weight in the mother's womb within a period of 280 days and capable of independent existence which is further taken care by the mother through lactation.

In our society a pregnant women has a special status and is given particular consideration. Nutritious diets are given and health care is taken, but as soon as pregnancy period is over, newborn and mother are in the hands of different taboos and culture. Adequate nutrition of the mother during lactation is of vital importance since during the first few months of life; the infant derives all his nutrition from the mother's milk. Any inadequacies in her diet influence both the quality and quantity of milk secreted. A well nourished mother on an average secretes about 850 ml. of milk/day; whereas in case of malnourished mother,

the level may go down to as low as 400 ml./day. It is therefore, of extreme importance to provide adequate nutrition during lactation so that the mother is not only able to provide sufficient quantity and adequate quality of milk for the growing infant but is also able to maintain her own health and nutritional status.

In tribal belt of Shahdol (Madhya Pradesh) district, Baiga and Gond are the main residents and they belong to below poverty line (BPL) group. Keeping the fact, 'the importance of nutrition during lactation' the present study was carried out on the tribal lactating women with the following specific objectives :-

1. To know whether they are taking balanced and nutritious diet.
2. To know the problems of food intake of lactating mothers.
3. To know the dietary beliefs and taboos during lactation.
4. To see the overall dietary impact and the deficiency diseases prevalent.

METHODOLOGY

100 lactating mothers of 10 villages like Narwar, Bijauri, Rohania, Chuneeria, Chhatwai, Pongari, Pipariya, Patasi, Kotma and Maiki which belongs to the tribal belt of Shahdol (M.P.) district were selected randomly. They all belonged to below poverty line and were hard working women (labourer). The information was collected by 24 hours recall method and by food frequency method of the previous days diet with the aid of questionnaire

prepared. Then the total consumption of food according to energy (carbohydrate) protein, fat, vitamins and minerals were calculated and compared with the recommended dietary allowances of lactating mothers (ICMR hyderabad 1990). Anthropometric measurements like height in cms and weight in kilograms were taken and compared with the normal height and weight chart of the Indian women. Haemoglobin was estimated by haemoglobinometer and was compared with the normal range of haemoglobin of Indian women.

RESULTS AND DISCUSSION

The data related to dietary intake, food groups, anthropometric measurements, haemoglobin estimation were analysed and the findings were categorically reported as under :

Nutrient intake of heavy working lactating women

Nutrients	RDA of heavy worker (ICMR 1990) Lactation period 0-12 months	Calculated
Energy (Kcal)	3325 to 3475	3315-3470
Protein (gm)	68-75	59
Fat (gm)	45	11
Calcium (mg)	1000	1010
Iron (mg)	30	28
Retinol (mg)	950	-
B. Carotene (ug)	3800	3300
Thiamine (mg)	1.5	1.2
Riboflavin (ug)	1.8	1.5
Niacin (ug)	20	18.2
Pyridoxine (ug)	2.5	2.1
Folic acid (ug)	150	106.5
Vitamin B12 (ug)	1.5	.96
Ascorbic acid (ug)	80	90

From the above calculated datas it is observed that lactating women's of tribal belt are not taking balanced diet. Energy is obtained from the cereal group mainly rice and rest of calories are supplied from the alcohol

consumption (country liquour) which meets the recommended energy by ICMR of heavy workingwomen's. **Proteins** are not from high biological value, they are mainly from plant origin and is 20% less than the normal protein required. **Fats** consumption is very low only 25% of total fat is consumed means 75% less fat than normal fat required. **Carbohydrate** is consumed more because it provides bulk thus stomach gets filled up. **Calcium** intake is very low from diet compared to the normal recommended allowance, this is due to no milk & milk products intake but the rest of the calcium is supplied by the lime eaten with the tobacco. **Iron** intake is normal they eat leafy vegetables of different varieties but iron from vegetable source is absorbed less in the alimentary canal. All **vitamins** except thiamine, folic acid and vitamin B12 are normal compared to recommended dietary allowances.

Balanced diets of heavy working lactating women

Food groups	Normal		Calculated
	NonVeg	Vegetarian	
Cereals	475 gms.	475 gms.	750 gms.
Pulses	55 gms.	70 gms.	30 gms.
Milk and milk product	100 ml.	200 ml.	-
Leafy vegetables	125 gms.	125 gms.	100 gms
Vegetables roots & tubers	100 gms.	100 gms.	50 gms
Other vegetables	100 gms.	100 gms.	30 gms
Meat & fish	30 gms.	-	25 gms
Egg	30 gms.	-	-
Fruit	30 gms.	30 gms.	-
Fat	45 gms.	40 gms.	10 gms
sugar & Jaggery	40 gms.	40 gms.	20 gms
Ground nut	40 gms.	40 gms.	-
Bengal gram puffed	50 gms.	50 gms.	-

Anthropometric measurements of Indian women

	Normal	Calculated
Weight (kgs)	38-41 Kgs.	35.5 Kgs.
Height (cms)	148-168 cms.	145 cms.

Haemoglobin percentage of Indian women

	Normal	Calculated
Haemoglobin	13.7%	7.5 - 9.5%

Food groups like milk & milk products and fruits are not eaten because of the unavailability. Pulses are eaten less because of high price & more cooking time is required. Being non vegetarian meat and fish are eaten by them but the quantity consumed is very low.

From the anthropometric measurements of height & weight of tribal lactating women was observed that height was less compared to normal height of Indian females & weight was just touching the lower borderline of normal weight of Indian females.

Haemoglobin was found to be less than the normal level. In spite of eating green leafy vegetables which are high in iron content haemoglobin % was less due to deficiency of folic acid and Vitamin B12 in the diet thus leading to anemia.

The lots of dietary belief & taboos which do not have any scientific background like concept of 'hot' & 'cold' foods is widely prevalent similarly some foods are considered 'heavy' and others 'light'. Avoidance of sour foods is also prevalent.

The shocking factor which came across survey & study was 'no food & water' for three consecutive days to mother & child just after delivery, no matter if weather is hot. Then diet is given only once in a day for 10-12 days

then normal routine of 3 times eating is resumed. Mothers generally do not feed colostrum to their babies as they believe that this is the dirty milk stored in the breast for a period of nine months & is thus, unfit for the baby therefore common practice of discarding it, is prevalent.

CONCLUSION

By the analysis of dietary survey of the 100 lactating mothers of 10 tribal villages it is observed that they do not consume balanced diet. Their food is deficient in many essential nutrients like protein, fat, thiamine, folic acid, vitamin B12 etc. Proper amount of food groups is not consumed. Due to all these factors majority of lactating mothers are malnourished & suffer from many deficiency diseases like anemia, dry skin, dehydration just after delivery etc. The main reason behind these factors are :-

- (1) Lack of nutrition education.
- (2) Poverty-they belong to below poverty line (BPL)
- (3) Unavailability of food products.
- (4) Inadequate food production.

With the improvement of the nutritional status of lactating women they will be free from vicious circle of disease and infection and will also be able to promote healthy infants. If these reasons are overcome then there will be improvement in the nutritional status of infants and lactating women's of tribal belts of Shahdol district Madhya Pradesh.

REFERENCES

1. Swaminathan M.-'Food & Nutrition' volumes I reprint 2003. Page 577.
2. Gopalan.C, B.C. Ramasastri and S.C. Balasubramanian - 'Nutritive value of Indian foods' edition 1989, Page 94.
3. F.P. Antia - Clinical Dietetics and Nutrition, second edition.
4. Corinne H. Robinson, Marilyn R. Hawler-'Normal & therapeutic Nutrition' - 16th edition. Page 330 - 343.