

Anaemia among women and children of India

P.LT Girija
Sanjeevani Ayurveda
Vaidyasala and Yoga Centre,
Chennai

PLT Girija is a practicing Ayurvedic Physician. She started Sanjeevani, an Ayurveda Vaidyasala and Yoga Centre in Chennai with a deep conviction that our ancient heritage of Ayurveda is the most efficacious of all the medical systems and is capable of effectively meeting all the healthcare needs of our society. She has held position of Honorary teacher in Ayurveda colleges in Chennai. She is currently functioning as a consultant for Tamil Nadu Government for Health Systems Development Project & Reproductive and Child Health Project, in guiding the TN Government to mainstream Indian System of Medicine in the state. She has authored books and articles in Tamil and English. She plans to establish an Ayurvedic centre which will be a home for all the eight limbs of Ashtanga Ayurveda.

ABSTRACT

Anaemia is a major public health issue in India today. Anemia can be called our national disease and in fact it is a national calamity. The figures for anemia among women and children of India are truly staggering. It is estimated that more than half of all Indian women and 3/4th of Indian children suffer from anemia. The paradox about anemia is that, in India the level of anemia does not seem to have any relationship with the =material wealth of the state- measured in terms of Net State Domestic Product (NSDP). Nor does anemia seem to have any relationship to the nutritional intake in different states measured in terms of calories proteins and fat. Neither the nutritionists nor the economists and sociologists of our country are able to provide any insight into this paradox. The only explanation possible for this paradox is provided by an Ayurvedic perspective. Ayurveda understands and treats anemia effectively and can offer a solution for this national problem.

In this paper we will focus on anemia among women and children of India. We will examine the nature and extent of the problem facing our women and children.

WOMEN

According to the National Family Health Survey (NFHS-II, 1998-99) 52% of Indian women are anemic. However, other (informal) estimates put this at 90%. (See for instance, The Hindu dated 4th September, 2005.) In major states like Bihar, Orissa, West Bengal more than 60% of the women suffer from

anemia, whereas in Kerala anemia level is the lowest in the country – 22.7%. Data from the National Nutrition Monitoring Bureau (NNMB-2003) indicate that in India nearly 75% of the pregnant mothers are anemic. For the eight states for which data is available, anemia among pregnant mothers ranges from a low of about 50% in Kerala, to a high of about 84% in Madhya Pradesh.

Anemia has a major detrimental effect on women's health. Anemia during pregnancy increases the risk of death or disease of both the mother and the child. In India, anemia is by far the most significant cause of maternal mortality (MMR), that is death from pregnancy and childbirth related causes. Every year, more than 100,000 women die from these causes in India. It is estimated that 40% of these maternal deaths are caused by anemia and anemia- related complications. Maternal mortality (MMR) in India is among the highest in the world- 540 deaths per 100,000 live births. Putting this in some perspective, MMR in India is about 100 times that of Sweden and ten times that of China.

Complications during pregnancy and childbirth due to anemia among pregnant mothers have been well documented. Conditions such as abortions, premature births, bleeding during childbirth and low birth weights of infants are associated with anemia during pregnancy. In general, anemia increases the susceptibility of women to diseases especially after childbirth. It is known that anemic mothers give birth to anemic children. The more acute the anemia of the mother the more severely the child is affected.

Anaemia among children, women and pregnant women by state, India				
State		% of Children with anaemia	% of Women with anaemia*	% of Pregnant women with anaemia **
India		74.3	51.8	74.6
North	Delhi	69.0	40.5	
	Haryana	83.9	47.0	
	Himachal Pradesh	69.9	40.5	
	Jammu & Kashmir	71.1	58.7	
	Punjab	80.0	41.4	
	Rajasthan	82.3	48.5	83.8
Central	Madhya Pradesh	75.0	54.3	
	Uttar Pradesh	73.9	48.7	
East	Bihar	81.3	63.4	
	Orissa	72.3	63.0	81.5
	West Bengal	78.3	62.7	77.1
Northeast	Arunachal Pradesh	54.5	62.5	
	Assam	63.2	69.7	
	Manipur	45.2	28.9	
	Meghalaya	67.6	63.3	
	Mizoram	57.2	48.0	
	Nagaland	43.7	38.4	
	Sikkim	76.5	61.1	
West	Goa	53.4	36.4	
	Gujarat	74.5	46.3	
	Maharashtra	76.0	48.5	75.9
South	Andhra Pradesh	72.3	49.8	73.8
	Karnataka	70.6	42.4	79.8
	Kerala	43.9	22.7	50.1
	Tamil Nadu	69.0	56.5	69.0

Source : *NFHS -2 (1998 - 99)**National Nutrition Monitoring Bureau 2003

CHILDREN

The health status of Indian children is a cause for great concern. The health of Indian children seems to be even worse than that of the mothers. The levels of Anemia among infants and children of India are truly worrying. About ¾ th of Indian children are anemic. In the age group of 6-35 months nearly 75% are anemic. In this the most vulnerable group is that of 1-2 years and in this group anemia affects 77.7%. In states like Haryana, Rajasthan, Bihar, and Punjab more than 80% of the children in the age group 6-35 months are anemic. Deficiency in blood in the beginning of life affects all aspects of a child's growth and development. With more than 75% of pregnant mothers chronically anemic more often than not children are born with low birth weight (weight below 2.5 kgs). Children born with low birth weight are inherently weak. They lack resistance to diseases. Low birth weight constitutes a very important cause for infant mortality – death before the age of one. It is estimated that at least one third of the new born in India are of low birth weight.

If we compare the different states in India the statistics on Kerala are very revealing. The percentage of women in Kerala having anemia is 22.7%, the lowest in the country. The percentage of children with anemia in the age group of 6-35 months in Kerala is 43.9%, which is also the lowest in the country. The infant mortality rate in Kerala is also the lowest in the country. Now if we compare the material wealth of different states, the per capita Net State Domestic Product (NSDP) of Kerala is far below that of most other states. Punjab, which is one of the richest states in India in terms of NSDP, has one of the highest percentage of children who are anemic, 80%. Tamilnadu and Kerala both have about the same per capita NSDP but if we compare the anemia figures for women, pregnant mothers, and children as well as infant mortality, the figures of Tamilnadu are far higher than those of Kerala. This is so in spite of near 100% institutional deliveries in Tamilnadu, with high quality medical care, attended by health professionals, equipped with good infrastructure and with modern equipments and modern medical professionals.

**The National Sample Survey (NSS) is the primary source of nutritional information in India.
The data given here are from the 55th round of the NSS, 1999-2000th**

**Average per capita intake of Calorie, Proteins and fat Per diem by major states *
and % of women and children with anemia****

	Calorie		Protein		Fat		Anemia	
	Rural (Kcal)	Urban (Kcal)	Rural (gm)	Urban (gm)	Rural (gm)	Urban (gm)	Women %	Children %
A.P.	2021	2052	49.4	50.8	29.5	41.5	49.8	72.3
Assam	1915	2174	47.7	56.5	22.3	38.7	69.7	63.2
Bihar	2121	2171	58.7	61.0	26.5	34.2	63.4	81.3
Gujarat	1986	2058	54.2	54.7	53.8	67.0	46.3	74.5
Haryana	2455	2175	75.3	62.5	59.1	56.3	47.0	83.9
Karnataka	2028	2046	54.2	53.5	36.6	45.1	42.4	70.6
Kerala	1982	1995	52.4	55.2	38.8	42.9	22.7	43.9
M.P.	2062	2132	58.2	60.6	31.3	43.5	54.3	75.0
Maharashtra	2012	2039	56.5	55.9	39.7	52.6	48.5	76.0
Orissa	2119	2298	49.5	57.8	16.3	27.4	63.0	72.3
Punjab	2381	2197	71.7	64.8	58.7	57.9	41.4	80.0
Rajasthan	2425	2335	76.9	70.4	53.5	61.5	48.5	82.3
T.N.	1826	2030	44.9	51.7	29.5	43.2	56.5	69.0
U.P.	2327	2131	69.7	62.0	37.6	45.5	48.7	73.9
W.B	2095	2134	51.6	55.5	24.2	40.2	62.7	78.3
All India	2149	2156	59.9	58.5	36.1	49.6	51.8	74.3

Source : * NSS 55th round 1999-2000 ** NFHS (2) 1998-1999

One conventional argument by economists and sociologists is that the women and children in Kerala have benefited from a wide spread modern health care system. However it is instructive to note that in the case of Tamilnadu modern medical interventions have not brought about a reduction in anemia levels. Another state where anemia levels of women and children are low is Manipur, which does not seem to have a wide-spread modern system of health care. Therefore the reach of modern system of health care is also not a factor, which explains low levels of anemia.

NUTRITION AND ANEMIA

CALORIE INTAKE

Now let us look at nutrition and anemia, i.e., the relationship between anemia and food intake in terms of calories, proteins and fats. If we compare the per capita calorie consumption of Kerala, it is lower than most other states in India. Both in urban and rural Kerala the calorie intake is lower than the national average. This pattern remains consistent for all the years in which the NSS data is available – 1972-73, 1983, 1993-94, 1999-2000. Only two other states, Assam and Tamilnadu have lower calorie intake than Kerala. Some of the states which have a relatively high calorie intake are

Rajasthan, Hariyana and Uttar Pradesh. In these states the levels of anemia among women are more than double that of Kerala. In Punjab which also has a relatively high level of calorie intake, the anemia level among women is nearly double that of Kerala.

PROTEIN INTAKE

Kerala also has a protein intake, which is less than the national average, both in urban and rural areas. This is also true for all the NSS rounds, 1972-2000. Rajasthan, Haryana, Punjab and U.P., all have protein intake far higher than that of Kerala.

FAT INTAKE

Fat intake of Kerala is lower than the national average in the urban areas and only marginally higher in the rural areas. Fat intake of Kerala is far below that of Gujarat, Haryana, Punjab and Rajasthan.

From the above, it seems that a diet high in calories, proteins and fats does not ensure a corresponding reduction in anemia levels. Sociologists and economists call this the Kerala Paradox, that Kerala which has fairly low levels of calorie, protein and fat intake also has the lowest levels of anemia among women and children. Some attribute this to the spread

of literacy in Kerala, as if to say that highly educated people are not anemic! Others attribute this phenomenon to the spread of modern healthcare and modern health interventions. But as we have seen this is not necessarily true, as in the case of Tamilnadu. Some go to the extent of attributing this paradox to the source of data itself – that there is something wrong with the data, since it goes against our pre-conceived notion of the outcome!

NATIONAL NUTRITIONAL ANAEMIA

PROPHYLAXIS PROGRAMME

It is not as if the crisis of anemia has escaped the attention of the Indian State. During the 4th Five year plan, the Govt. of India introduced the National Nutritional Anemia Prophylaxis Programme. The stated objective of this programme was to prevent anemia among mothers and children (1-12 years). The programme involves daily supplement of Iron and Folic Acid (IFA) tablets to prevent 'mild' and 'moderate' anemia. The target groups are 'at risk' groups – pregnant women, lactating mothers and children under 12 years of age. As part of this programme pregnant women are expected to consume 100 tablets of iron and folic acid over a period of 3 months during pregnancy. Advice on so-called “iron-rich food” is given. This programme is now a part of the Reproductive and Child Health Programme (RCH) in every state. However, to say that this programme has been a failure is an understatement. After all these decades, with many hundreds of crores spent, women and children of India continue to be chronically anemic, as can be seen from the data.

THE NEED FOR AN ALTERNATIVE PERSPECTIVE – THE AYURVEDIC APPROACH

Obviously, even after several decades if we have not succeeded in getting rid of anemia it only means that we have not understood the disease. We have not understood the various factors related to food and regimen that give rise to Anemia.. In Ayurveda this disease is called Pandu. It affects one of the seven *Dhatus* in the human body. (*Rasa* etc.) These seven *Dhatus* or tissue elements are the building blocks of the body. These *Dhatus* are formed from the food that we consume. Of these, the second is *Rakta* or blood. Blood is responsible for the sustenance of life itself. When blood is vitiated resulting in a loss of its quality and quantity, one is afflicted by the disease Pandu or Anemia. Therefore Anemia leads to whole host of problems affecting the life-sustaining factors in the body.

There are various factors that lead to a deficiency of blood in a human being. Improper food is one of the important causes of anemia. For instance, a diet excessively sour, salty and pungent is one of the causative factors for anemia. So also is

the consumption of alcohol, physical exertion and day sleep. Excessive physical exertion combined with wrong kind of food can leave anyone anemic. That is why the majority of Indian women, specially the poor, are anemic. Therefore, someone who consumes more than the stipulated levels of calories, proteins and fats and even iron, may still be anemic if the diet, work and regimen are not proper.

ANEMIA AND PREGNANCY

The food and regimen recommended in Ayurveda for a pregnant mother ensures an anemia-free pregnancy. This is because the diet and regimen which are beneficial and those which are harmful for a pregnant mother are the same as those for a person with anemia. It is therefore easy to see that when pregnant mothers are treated in the Ayurvedic way, there is very little chance of their being afflicted by anemia.

CONCLUSION

Kerala, which has by far the lowest levels of anemia in the country, enjoys a major advantage over other states, namely the survival and practice of the traditional system of healthcare based on Ayurveda. The household food and healthcare practices of the people of Kerala are even today based largely on Ayurvedic principles. It may not be wrong then to conclude that the low levels of anemia among women and children of Kerala are due to healthcare practices that are deeply rooted in the Ayurvedic tradition. Incidentally, Kerala also has the best sex-ratio (female/male) in the whole country. It may also be said that wherever the position of women in society and family has remained relatively unaffected, women have continued to practice the traditional diet and healthcare practices in their households. As these practices have remained largely unaffected, they have also ensured a better health for women and children. This may not hold good for other states like U.P., Bihar or Tamilnadu, which seem to have undergone major changes during the period of British rule. Perhaps there may be other factors also which need to be studied. One major problem that sociologist, economists and other social scientists face, has to do with the paradigm. With the modern Western paradigm it is not possible to understand or interpret these phenomena, which affect our society in a major way. It is the task of our sociologists and economists to stop blindly following the paradigms of modern medicine and science. The subject of anemia clearly shows that without an appreciation of the Indian Systems of medicine (ISM) we will come to utterly wrong conclusions and act based on such conclusions. Unless there is a shift in this paradigm, our economists and sociologists will continue to find it difficult to explain many of these paradoxes.