

A Literary Review on Emblica Officinalis in Pregnancy Induced Anaemia

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Abstract—India has the highest rate of iron-deficiency anaemia among women in the world. Many women are deficient in iron before they become pregnant. And research indicates that about six out of 10 pregnant women in India are anaemic. Some surveys suggest that anaemia may be even more common than this. In India, many women have a diet that is low in iron. It is more difficult for the body to absorb iron from normal routine dietary sources of iron. So Indian women need a larger amount of iron-rich foods in their diet to fulfil the needs of the body. Normally 60 – 120 mg elemental Iron is supplemented once in a day only from 16 weeks of pregnancy in form of Iron pills which causes multiple side effects, but if the Amalaki (*Emblica officinalis*) churna is added with these Iron pills it increases its absorption and reduces the side effects. One amla will help you meet the recommended daily allowance of 85mg vitamin C during pregnancy because 100gm of amla contains about 500mg to 1800mg of vitamin C.

Index Terms— pregnancy induced anaemia, amalaki, *Emblica officinalis* iron deficiency

I. INTRODUCTION

Anaemia in pregnancy is common and it is most often caused by iron deficiency. In India, incidence of anemia in pregnancy has been noted to be as high as 40 – 80% and about 4 – 16% of maternal deaths are due to anemia. It also increases maternal morbidity, fetal, neonatal mortality and morbidity significantly. Iron is a mineral that everyone needs. Pregnant women needs more iron for a variety of reasons. The biggest reason is that iron help to make new blood cell to carry the oxygen and nutrients to the fetus during pregnancy. A pregnant woman repair about 2 to 4.8 mg iron every day, through the dietary source consumed 20 – 48 mg of dietary iron. This is practically not possible in India, because an average diet does not contain more than 10 – 15 mg or iron. Indian diet consists of cereals and cereal contains phytic acid, phytate reduce iron absorption. So to cure anemia, iron pills are given as supplement, but iron pills are not the answer for everyone because it can cause diarrhoea, constipation, stomach upset and are not readily absorbed as the iron from food. If the Amalaki (*Emblica officinalis*) Churna is added with iron tablet it enhances the action of iron by increasing its absorption and lowering the adverse effect of iron

tablet. There are other types of anaemia too. They are caused by lack of Folic acid (folate-deficiency anaemia) Vitamin B12 (megaloblastic anaemia) A combination of folic acid and vitamin B12 (macrocytic anaemia) However, the most common type of anaemia in pregnancy is iron-deficiency anaemia.

II. PREVALENCE RATE OF PREGNANCY INDUCED ANAEMIA IN INDIA

In a study of the Indian Council of Medical Research (ICMR) in 1989, prevalence of anaemia in 4181 pregnant rural women of 11 States was estimated and it was demonstrated that 87.6 per cent women had haemoglobin (Hb) < 7.0 g/dl were excluded) had 62 per cent women as responders (anaemic-those responding to haematinic therapy by showing rise in haemoglobin). Even after consuming 90 tablets, 37.8 per cent women had haemoglobin less than 10.0 g/dl and 19.4 per cent had less than 9.0 g/dl. During 1986-1991 haemoglobin estimations in rural pregnant women in Varanasi showed 94.5, 95.3 and 95.9 per cent prevalence of anaemia in I, II and III trimesters. ICMR district nutrition survey 1999-2000 also reported prevalence of anaemia as 84.2 per cent with 13.1 per cent with severe anaemia in pregnancy. Haemoglobin in all these studies was estimated by cyanmethaemoglobin method. Contrary to the above studies, the NFHS-2 (National Family Health Survey, 1998-1999) data using hemocue system reported prevalence of anaemia as 49.7 per cent in pregnant women; 56.4 per cent in breastfeeding non pregnant; and 50.4 per cent among non-pregnant non breastfeeding women. Hemocue system estimates higher levels of haemoglobin 14-16, thus is difficult to compare with the earlier studies 8-11. The Hemocue method is costlier, but operationally easier, more portable and requires less training; hence it can be optimally used in the field work.

Phytochemistry of *Emblica officinalis* Amla is very well known for its high vitamin C content, which is a very potent antioxidant. 100 ml of Amla juice contains 480 mg vitamin C which is more than any other citrus fruit. Besides vitamin C Amla is also a rich source of polyphenols that possesses antioxidant properties. A combination of vitamin C and polyphenols help to fight against oxidative stress, stimulate the immune system and keeps disease and disorders away. The

phenolic compounds present in Amla have been proved responsible for antioxidant away. The phenolic compounds present in Amla have been proved responsible responsible for antioxidant activity.

1. Quercetin
2. Kaempferol
3. Isocorilagin
4. Galic acid
5. Ellagic acid
6. Gerani

TABLE I
AMLA CONTAINS

Alkaloids	Phyllantine, Phyllembain, Phyllantidine
Amino Acids	Glutamic Acid, Proline, Aspartic Acid, Alanine, Cystine, Lysine
Carbohydrates	Pectin
Vitamins	Ascorbic Acid
Flavonoids	Kaempferol, Quercetin
Organic Acids	Citric Acid
Phenolic Compounds	Gallic Acid, Methyl Gallate, Ellagic Acid & Trigallayl Glucose
Hydrolysable Tannins	Emblcanin A And B, Punigluconin, Pedunculagin, Chebulinic Acid (Ellagitannin), Chebulagic Acid (Benzopyran Tannin), Corilagin (Ellagitannin), Geraniin (Dehydroellagitannin), Ellagotannin

III. MATERIALS AND METHODS

A. Materials

Available literature regarding reference of anemia in pregnancy and its management and effect of Amla on anemia

B. Methodology

Literature study, Emblica officinalis was studied in detail from all the available literature for its role in Anemia.

IV. DISCUSSION

A. Health Benefits of Amla (Gooseberry) During Pregnancy

Amla can be taken in both raw and powdered form. It has a range of benefits for both the mother and the baby. Here are a few of them:

B. Relieves Constipation

Gastrointestinal disorders such as constipation and hemorrhoids are quite common during pregnancy. Amla offers the required fiber to regulate bowel movements and treat other gastrointestinal problems.

C. Normalizes Blood Pressure

Vitamin C is abundant in amla, which dilates blood vessels, and normalizes blood pressure. Taking a glass of fresh amla juice every day can prevent acidity and heartburn during pregnancy

D. Reduces Morning Sickness

Morning sickness is one of the early pregnancy symptoms that troubles many to-be mothers. Amla has energy-boosting and rejuvenating properties that help overcome weakness when a lady is pregnant. It also reduces the feeling of tiredness and stress thus re-energizing your body

E. Purifies Blood

Amla has detoxifying properties that purify the blood .It removes the harmful effects of mercury and lead, and supports the constant supply of blood and oxygen to the developing fetus

F. Prevents Anemia

Amla is an excellent source of vitamin C and iron. Vitamin C aids iron absorption by the blood to maintain normal hemoglobin levels

G. Improves Digestion

Amla stimulates gastric juices and, thereby, helps in food digestion and absorption. Regular consumption of amla can, thus, reduce digestive issues such as gas formation and indigestion.

H. Enhances Immunity

Antioxidants boost the immune system and vitamin C helps combat infections such as common cold and urinary tract infection, which are common during pregnancy. An added benefit is that it promotes lactation post-delivery thus giving your infant immunity-boosted breast milk.

I. Calcium Source

Calcium content in this fruit contributes to the fetal teeth and bone development. During pregnancy, the calcium requirement doubles as the baby's calcium needs are extracted from the mother's bones. Therefore, regular consumption of amla offers sufficient calcium.

J. Treats Edema

The anti-inflammatory nature of amla aids in reducing the swelling of hands and feet that is common during pregnancy.

K. Body Detox

Amla has high water content. It increases your urine frequency and flushes away the toxins and radicals from the body.

L. Eliminates Gestational Diabetes

Amla with its anti-diabetic nature can lower the chances of gestational diabetes.

M. Maintains Lipid Profile

Amla supports a perfect lipid profile, which is a highly favorable condition during pregnancy. While amla is packed with benefits, there could be a few things you must watch out.

V. CONCLUSION

Amla has immense benefits for pregnant women but over consumption can cause constipation, diarrhea, indigestion, and dehydration. Therefore, you should eat it in limited quantities.

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