

# A Review Article on Efficacy of Homeopathy in Iron Deficiency Anemia

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## Abstract

Iron Deficiency Anemia (IDA) is one of the most common dietary deficiencies, accounting for about half of all instances of anemia. It is widespread in many impoverished nations. In most cases, thorough blood analysis and high serum ferritin levels may be used to diagnose this deficient disease. IDA may develop as a result of physiological pressures placed on developing children, adolescents, and pregnant women. In the case of all patients, however, the underlying reason should be explored. Inevitably, proper therapy of this illness improves quality of life, reduces iron deficient symptoms, and reduces the risk of death. The necessity of a blood transfusion oral iron supplementation and intravenous iron therapy are two therapeutic options. As a result, intravenous iron supplementation is regarded an undesirable technique, and the safety problems connected with this strategy in the event of extremely high dosages or in the context of very high ferritin levels are not well understood. The review's goal is to give a critical overview and up to date information about IDA diagnosis and treatment options.

**Keywords:** Anemia • Hemoglobin • Iron deficiency anemia • Reticulocyte count • Kilonychia • Bleeding • Debilitated conditions

## Introduction

Anemia is a global public health issue that affects approximately a billion people, or roughly two-thirds of the world's population, in both industrialized and developing countries [1]. Iron Deficiency Anemia (IDA) is the most frequent kind of anemia. Hemoglobin is the oxygen binding component of red blood cells [2]. If the body has abnormal or insufficient red blood cells, or if the hemoglobin level is abnormal or low, the cells within the body will not receive enough oxygen, resulting in abnormal bodily conditions. In the general population, it is the most common blood condition. Any level less than 13 g/DL for men and 12 g/DL for women is regarded as abnormal. Iron deficiency is frequently not symptomatic or clinically noticeable and develops progressively over time [3]. Iron accessibility to the tissues decreases as iron reserves are depleted, resulting in clinical anemia. Iron is one of the most common elements, accounting for around 5% of the earth's crust in the form of various mixed ores. Iron is a bio metal that has always been important, owing to its capacity to rapidly accept and release electrons by flipping between Ferrous ( $\text{Fe}^{2+}$ ) and Ferric ( $\text{Fe}^{3+}$ ) ions. The transfer of electrons between iron and donor/recipient molecules causes the body to perform various important activities. It functions as an oxygen transporter for tissues, a medium for electron transfer within cells, and an integrated component [4].

## Literature Review

### Epidemiology

Anemia is a global public health issue that affects both developing and wealthy countries, with serious implications for human health and social and economic development. It affects people at all stages of life, but it is more common among pregnant women and small children [5].

The estimated global anaemia prevalence is 24.8% (95% CI 22.9, 26.7%), affecting 1.62 billion people (95% CI 1.50, 1.74 billion). In the present study, overall 53.2% beneficiaries were anemic out of which 45.1% were anemic males and 54.9% anemic females in India. In the 1 year-4 years age group, iron deficiency is 44.4% and Rajasthan ranks 21 of 30 states. Jaipur: The Centre's National Family Health Survey (2019-21) NFHS-5 has revealed startling statistics showing that prevalence of anaemia has not only increased among children and women, but has gone up among men as well. Comparing prevalence of anaemia in NFHS-4 (2015-16) with NFHS-5 (2019-21), the figures shows that in children aged 6 months-59 months, the prevalence has increased from 58.6% to 67.1%, a massive jump of 8.5%. In women aged from 15 years-19 years, anaemia has gone up

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from 54.1% to 59.1%. The NFHS survey further shows that in pregnant women (15 years-49 years) it rose to 52.2% from 50.4%. In non-pregnant women (15 years-49 years) too, it has gone up from 53.2% to 57.2%. While in all women aged 15 years-49 years, it increased from 53.1% to 57%. Not only in children and pregnant women, prevalence of anaemia has increased among men. In men aged from 15 years-49 years, its prevalence has increased from 22.7% to 25% and in 15 years-19 years old men, it has gone up from 29.2% to 31.1% [6].

## Etiology

The main cause of iron deficiency anemia is an imbalance between tissue iron requirements and body iron storage, which occurs as a result of disorders that cause blood loss. Anorexia is common in youngsters, psychiatric patients, and patients suffering from anorexia for whatever reason.

### Absorption with defects

- Sprue syndrome
- Gastrectomy
- Gastrojejunostomy

### Extreme demand

- Thyrotoxicosis
- Growing children

### Excessive weight loss

- Anemia caused by hookworms.
- Menorrhagia in females.
- Bleeding piles.
- Recurrent haematemesis and melena due to gastrointestinal ulcers, oesophageal varices rupture, and gastrointestinal cancer.
- Hernia hiatus.
- Blood donation on a regular basis, long-term haematuria, diverticulitis, and medications such as aspirin.
- Iron sequestration.
- Pulmonary haemosiderosis.
- Acute and chronic hemoglobinuria.

## Symptoms

- Fatigue and decreased ability to do strenuous labor.
- Leg cramps from stair climbing.
- PICA, especially for sucking or chewing ice.
- Lowered immunity.
- Anger, headaches, palpitations, dizziness, and shortness of breath.

## Signs

- Mucous membrane pallor.
- Spoon-shaped nails, or konychia.
- Glossy tongue with lingual papillae atrophy and angular stomatitis.

## Investigations to detect IDA

### Blood examinations

- Low hemoglobin percentage.
- RBC count usually follows percent Hb.
- MCV low, 50 fL-80 fL.
- MCH low, 15 pg-26 pg.
- MCHC low, 24 g/dL-30 g/dL
- CI less than 1.
- Reticulocyte count is frequently low, and peripheral blood film displays hypochromic, anisocytosis, poikilocytosis, ring or pessary cells, and pencil shaped cells.
- TLC and DLC are both normal.
- Platelet count is within normal limits.
- Eosinophilia could be caused by a hookworm infestation.

### Blood biochemistry

- Serum iron concentration is less than 60 ug/dL.
- Total iron binding capacity (47-70 umol/L)=400 ug/dL.
- Ferritin level in plasma 30 ug/dL.
- Protoporphyrin level in red cells 100 ug/dL.

**Bone marrow:** The bone marrow is hypercellular, with hyperplasia displaying micronormoblastic response, normal granulopoiesis, and megakaryocytic; the iron concentration is low or nonexistent.

**Endoscopy:** Endoscopy is frequently used to examine for bleeding from a hiatal hernia, an ulcer, or the stomach. A small, illuminated tube with a video camera is passed down your neck and into your stomach during this treatment. This allows your doctor to examine the tube that connects your mouth to your stomach (esophagus) as well as your stomach for bleeding causes.

**Colonoscopy:** A colonoscopy may be recommended by your doctor to rule out lower intestine bleeding causes. In the rectum, a thin, flexible tube with a video camera is introduced and directed to the colon. During this test, the patient is normally anesthetized. A colonoscopy allows a doctor to see inside the colon and rectum to see if there is any internal bleeding.

**Ultrasound:** Women may also have a pelvic ultrasound to rule out uterine fibroids as a cause of excessive monthly bleeding.

## Complications of IDA

- Heart issues, such as heart failure or an enlarged heart as a result of the heart adjusting for a lack of oxygen.
- Pregnancy difficulties, such as low birth weights and an increased chance of preterm birth.

## Treatment for iron deficiency anemia

**Diet:** Anemia can be reversed with a well-balanced and healthy diet. Jiggery, dates, raisins, egg yolks, mussels, and liver are among the ingredients. Spinach, as well as other dark leafy greens, beans and dried. One of the richest sources of iron among plants is parsley (herb). Seeds and nuts fruits dried (apricots, peaches, raisins, and prunes) cereals fortified, soybeans with added nutrients yeast for brewing, cooking in iron pots and pans might also help you ingest more iron. Vitamin C can help the body absorb iron more effectively. As a result, a vitamin C rich diet consisting of fresh fruits and vegetables (alma, guavas, limes, oranges, tomatoes, cabbages, and so on) should be followed [7].

**The following are some common oral preparations and their dosages:**

- Ferrous sulphate, (325 mg three times a day).
- Ferrous fumarate (200 mg three times each day).
- Ferrous gluconate (300 mg-600 mg three times each day).
- Ferrous succinate (150 mg-300 mg three times each day).

**Treating the underlying cause of bleeding:** If the deficit is caused by excessive bleeding, iron supplements will be ineffective. Women with heavy periods may be prescribed birth control medications by their doctor. This can help to cut down on monthly menstrual bleeding. If the bleeding is caused by an injury, a tear, or another internal condition, surgery may be necessary to stop it. A red blood cell transfusion or intravenous iron can swiftly replace iron and blood loss in the most severe instances [8].

## Discussion

### Homoeopathic management of IDA

Homoeopathic medications are chosen based on constitutional similarities, which involves examining a person's physical, mental, and family inclinations, as well as the status of his current complaints. The following are some of the most often used homoeopathic medications for iron deficiency anemia. Homoeopathic therapy necessitates a comprehensive examination of the patient's physical and mental characteristics. This is the sole guide for homoeopathic similimum choosing.

#### *Cinchona officinalis* (China)

- China is the best for one who experiences excessive bleeding.
- Bleeding could be due to traumatic injury, periods and soon.
- The person is usually tired and faints quite often.
- China is used to control hemorrhage as well as improves blood quantity after bleeding episodes.
- *Cinchona* also helps to treat anaemia due to blood loss.

#### *Natrum muriaticum*

- *Natrum mur* helps to treat anemia due to grief.
- Reasons could be personal tragedy or any other circumstance.
- The condition worsens due to heat.
- One tends to ingest more of salt content food.

#### *Calcarea carbonica*

- It is the natural homeopathic medicines for anemia that work well to control pica.
- Constipation is marked along with pica. *Calcarea carb* is the homeopathic medicine recommended when there is a desire for lime, chalk and pencils.
- Craving for boiled eggs and increased sweat on head are important symptoms.
- Almost any of the deeper acting constitutional remedies may be of use in anemic and debilitated conditions.
- *Calcarea carbonica* is indicated by the psoric, scrofulous or tubercular diathesis and the general symptoms of the drug, by

disgust for meat, craving for sour and indigestible things, swelling of abdomen, vertigo and palpitation; on-going upstairs.

- The patient is in a state of worry.

#### *Ferrum metallicum*

- This remedy is best suited for young weakly persons, who are anemic with pseudo-plethora, who flush easily, have cold extremities, oversensitive to slight noises and whose complaints become worse after any active effort.
- There is weakness from mere speaking or walking.
- Red parts become white, bloodless and puffy.
- There will be breathing difficulty due to surging of blood to chest and anemic murmur can be heard.

#### *Ferrum phosphoricum*

- It is also a great homeopathic remedy, but it will not cure every case of anemia; careful individualization is necessary.
- When the patient has an appearance of full bloodedness or plethora, which is followed by paleness or earthiness of the face and puffiness of the extremities, then *Ferrum* will benefit.
- The patient is easily exhausted.
- Vomiting of food after eating may occur.
- The patient is constantly chilly and perhaps has an afternoon or evening fever simulating hectic fever.

#### *Kali carbonicum*

- It is one of the most important remedies in anemia, weak heart, profuse sweating backache, especially with female complaints.
- Lack of RBC's in blood, weakness along with menstrual disturbances at the time of puberty, milky white skin with great debility, bloated face, with swelling above eyelids.

#### *Lecithinum*

- This remedy has action on blood and is usually given for anemic individuals to increase the number of RBCs and amount of Hb.
- There will be mental exhaustion. The individual will be weak with shortness of breath, loss of flesh; will be forgetful, dull and confused.
- The headache in the occiput will be pulsating type and will crave for wine and coffee.

#### *Pulsatilla nigricans*

- It is well known medicine for iron deficiency anemia.
- Patient is mild, thirstless, aggravated by heat.
- *Pulsatilla* is the great antidote to iron, and hence is indicated in the anemic condition produced by large or continued doses of it.
- The system is relaxed and worn out; the patient is chilly and suffers from gastric and menstrual derangements.
- Thus the symptoms resemble closely those calling for *Ferrum*.
- The cause of the anemia must be sought for, and if the case comes from allopathic hands it is safe to infer that much iron has been given and *Pulsatilla* will surely be the remedy.
- The *pulsatilla* patient feels better in the open air.

- Dizziness on rising, absence of thirst, and the peculiar disposition will lead to the remedy [9].

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## Conclusion

Deficiency in iron in underdeveloped nations, anemia is one of the most frequent nutritional deficiency illnesses afflicting pregnant women. Iron deficiency anemia can be treated using homeopathy. Iron deficiency anemia can be addressed if the quantities of appropriately recommended homeopathic remedies are taken on a regular basis.

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## Recommendations

Public awareness campaigns to raise public knowledge of the problem and its causes. To promote healthy eating habits, nutrition education programs should be performed, particularly for women of childbearing age. Iron deficiency screening in high risk populations should be explored. Primary physician education is required to raise knowledge of IDA and the tests required to determine diagnosis and underlying causes. Some foods, such as salts, wheat, and juices, can be fortified to help lessen this prevalent condition.

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