

Anaemia: Symptoms, Causes, Prevention, Diagnosis and Treatment

Natasha Khalid, Nasrullah, Rana Khalid Iqbal*

Institute of Molecular Biology & Biotechnology, Bahauddin Zakariya University, Multan-60880, Pakistan

ABSTRACT

Anaemia is a disease in which we do not have enough red blood cells that contain iron containing protein haemoglobin that transport oxygen to all parts of body. Anaemia occurs when there is blood loss due to physical injury or due to menstruation in female. It can be prevented by eating balanced diet and also using iron supplements. Anaemia symptoms include fatigue, yellowish skin, yellowish eyes and feeling fever all the time.

Keywords: Anaemia; Malnutrition; Deficiency

INTRODUCTION

Anaemia is a condition in which you lack healthy red blood cells that transfer proper amount of oxygen to all the parts of the body. The word "Anaemia" explain itself "an" mean without and "aemia" mean red blood cells. If you have Anaemia then you feel fatigue and weakness all the day. Anaemia may be defined as a condition in which there is a deficiency of haemoglobin concentration in body and it may vary from person to person and gender to gender. The concentration of haemoglobin in men who have Anaemia is below 13 g/dl and in young girls of more than 15 years it is below 12 g/dl [1]. Its condition may vary from mild to severe in different people. It is curable at early stage and at acute stage it is serious and may be fatal [2].

Symptoms

Anaemia symptoms are different due to the cause of the Anaemia you have and their signs and symptoms are fatigue and weakness [3] all the time, pale or yellowish skin, abnormal heart beats, shortness of breath, sleeping all the time, chest or back pain, headache, their hands and feet are cold all the time and they cannot perform their routine work and are lazy all the time [4].

Causes

There are many causes of Anaemia but malnutrition is the main cause. The other factors that cause Anaemia are the iron deficiency, vitamin deficiency (vitamin B-12), chronic diseases, huge bleeding due physical injuries and during menstruation that leads to loss of red blood cells, in some cases your body

itself destroy the red blood cells and the body does not form the red blood cells [5]. Certain infectious diseases, pregnancy and age also cause severe Anaemia. At an age greater than 65 it may become severe if it is not controlled at an earlier stage [2]. Intestinal diseases, family background, alcoholism, sickle cell Anaemia, haemolytic Anaemia, malarial Anaemia also leads to chronic Anaemia [6].

Tests

Anaemia becomes complicated when it is not identified at initial stage. So when its symptoms appear one should consult the doctor. The test for Anaemia is CBC (complete blood count) which tells the exact composition of your blood and it tells either you are anaemic or not [7]. If your red blood cells that contain iron containing protein haemoglobin that carry oxygen to all parts of body are less than normal value then you are anaemic and if it is normal level then you are normal and not anaemic [8].

Complications of anaemia

Anaemia causes many complications if it is not treated at initial stages. It causes severe fatigue when it becomes complicated and that person feels sick and tired all the time [7]. If pregnant women has Anaemia of iron deficiency then it causes problems like premature birth etc. [8]. Anaemia can also cause heart problem because when you have Anaemia heart pumps more blood to all parts of the body to overcome the oxygen deficiency and the heart faces more burden and it becomes enlarged. Some

*Correspondence to: Rana Khalid Iqbal, Institute of Molecular Biology & Biotechnology, Bahauddin Zakariya University, Multan-60880, Pakistan, E-mail: Khalid.iqbal@bzu.edu.pk

Received: June 26, 2019; Accepted: July 11, 2019; Published: July 18, 2019

Citation: Natasha Khalid, Nasrullah, Rana Khalid Iqbal (2019) Anaemia: Symptoms, Causes, Prevention, Diagnosis and Treatment. Clin Med Biochem. 5:146.

Copyright: © 2019 Khalid N, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

types of Anaemia which are inherited like sickle cell Anaemia and thalassemia are more dangerous and are fatal [9].

Preventions

Anaemia is fatal disease when it becomes complicated, so it should be controlled at initial stage by adopting preventive measures to avoid it [10]. Eat iron rich food like meat, beans, nuts, green vegetables like spinach, full grain cereals, dried fruits, multivitamins, fruits which are rich in vitamin C [2].

Treatment

Anaemia is an iron deficiency disease so it can be treated by using iron containing foods like green vegetables and dates. When you have Anaemia, to overcome the deficiency of iron it is necessary to use iron supplements and multivitamins tablets [7]. When it becomes very complicated then blood transfusion becomes necessary. It becomes very complicated in young girls due to menses and also in pregnant women so they need proper treatment because it is more common in females [11].

CONCLUSION

Anaemia is very serious disease for females so they should be aware of it. It is also common in children and elders above 65 years. Due to lack of awareness about Anaemia many people die when it becomes complicated especially pregnant women [12]. It is our moral duty to create awareness about Anaemia by social media and by arranging seminars. People should be aware of symptoms, preventions, and treatments of Anaemia. In this way we can eradicate Anaemia from the society [13].

REFERENCES

- Contaldo A, Losurdo G, Albano F, Iannone A, Barone M, Ierardi E et al. The spectrum of small intestinal lesions in patients with unexplained iron deficiency anaemia detected by video capsule endoscopy. *Medicina (Kaunas)*. 2019;55(3):59.
- Estcourt LJ, Fortin PM, Trivella M, Hopewell S. Preoperative blood transfusions for sickle cell disease. *Cochrane Database Syst Rev*. 2016;4:003149.
- Conroy AL, Datta D, John CC. What causes severe malaria and its complications in children? Lessons learned over the past 15 years. *BMC Med*. 2019;17(1):52.
- Lengline E, Drenou B, Peterlin P, Tournilhac O, Abraham J, Berceanu A et al. Nationwide survey on the use of eltrombopag in patients with severe aplastic anaemia: A report on behalf of the french reference center for aplastic anaemia. *Haematologica*. 2018;103(2):212-220.
- Mehta PJ, Chapman S, Jayam-Trouth A, Kurukumbi M. Acute ischemic stroke secondary to iron deficiency anaemia: A case report. *Case Rep Neurol Med*. 2012;487080:1-5.
- Perkins DJ, Were T, Davenport GC, Kempaiah P, Hittner JB, Ong'echa JM. Severe malarial anaemia: Innate immunity and pathogenesis. *Int J Biol Sci*. 2011;7(9):1427-1442.
- Lee YK, Kim HJ, Lee K, Park SH, Song SH, Seong MW et al. Recent progress in laboratory diagnosis of thalassemia and hemoglobinopathy: A study by the Korean red blood cell disorder working party of the Korean Society of Hematology. *Blood Res*. 2019;54(1):17-22.
- Myers S, Dinga P, Anderson M, Schubert C, Mlotha R, Phiri A et al. Use of bubble continuous positive airway pressure (BCPAP) in the management of critically ill children in a Malawian paediatric unit: An observational study. *BMJ Open Res*. 2019;6(1):1-11.
- Petkova-Kirova P, Hertz L, Danielczok J, Huisjes R, Makhro A, et al. Red blood cell membrane conductance in hereditary haemolytic anaemias. *Front Physiol*. 2019;10:386.
- Haldar K, Mohandas N. Malaria, erythrocytic infection, and anemia. *Hematology Am Soc Hematol Educ Program*. 2009;2009(1):87-93.
- Kejo D, Petrucka P, Martin H, Mosha CET, Kimanya ME. Efficacy of different doses of multiple micronutrient powder on haemoglobin concentration in children aged 6-59 months in arusha district. *Scientifica*. 2019;8979456:1-7.
- Lambrecht NJ, Wilson ML, Jones AD. Assessing the impact of animal husbandry and capture on anaemia among women and children in low- and middle-income countries: A systematic review. *Advances in Nutrition*. 2019;10(2):331-344.
- Kassa ZY, Awraris T, Daba AK, Tenaw Z. Compliance with iron folic acid and associated factors among pregnant women through pill count in Hawassa city, south Ethiopia: A community based cross-sectional study. *Reprod Health*. 2019;16:14.