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Review Article

Aplastic Anaemia in Homeopathy: A Review

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ABSTRACT

Aplastic anemia is a rare disease in which the bone marrow and the hematopoietic stem cells that reside in it are damaged. This causes a deficiency of all three blood cell types (pancytopenia): red blood cells (anemia), white blood cells (leukopenia), and platelets (thrombocytopenia). *Aplastic* refers to the inability of the stem cells to generate mature blood cells. This review shows that Homeopathy medicines and treatment for aplastic anemia has proved to be highly effective.

Keywords: Aplastic Anaemia, Homeopathy, Bone Marrow.

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INTRODUCTION

Aplastic anemia (AA) is an acquired or congenital bone marrow failure in the production of all cell lines, without the presence of cancerous infiltrates and fibrosis, leading to pancytopenia. The incidence in Europe and North America is estimated at 2–3 and 5–6 cases/million/year in Asia. AA can occur at any age, but most cases fall between 15–25 years and over 60 years, without gender or race differences. Its etiology is not sufficiently understood.[1,2]

HISTORY

Aplastic anemia is an historic disease. The first patient was described by the young Paul Ehrlich in 1885, "anemia aplastique" originated with Vaquez in 1904, and its clinical features were described by Cabot and other pathologists in the early 20th century.[3]

PATHOPHYSIOLOGY

Three main pathophysiologies produce the pathology of an "empty" marrow.

Direct Marrow Damage

Damage occurs most often iatrogenically, from chemotherapy and radiation. Marrow effects are dose-dependent and, at conventional doses, transient; other organ systems are affected; and spontaneous recovery is expected. Benzene, an inexpensive solvent, also damages hematopoiesis, and industrially exposed workers figured prominent in the early literature of aplastic anemia.[4,5]

Constitutional Syndromes

Marrow failure results from loss-of-function germline mutations, usually inherited. A spectrum of genetic lesions diminish the hematopoietic stem's ability to repair DNA, as in Fanconi anemia (replication-dependent removal of inter-strand DNA cross-links)[5] and dyskeratosis congenita (telomere maintenance and repair)[6] or the stem and progenitor cells' differentiation and self-renewal pathways, as in *GATA2*[7]. Marrow failure has been appreciated in syndromes affecting immune regulation, as in *CTLA4*[8] and *DADA2*.[9]

Constitutional syndromes classically appear in childhood, often with characteristic physical anomalies; typically, organs other than marrow are involved; and family history often discloses affected relatives.

Fatal graft rejection has followed inadvertent use of an affected sibling[10] and persistent marrow failure after transplant in patients with mutations in the gene encoding the growth factor thrombopoietin.[11]

Immune Aplastic Anemia

Almost all sporadic aplastic anemia, especially when severe and acute, appears to be immune-mediated. The strongest, most relevant evidence for an immune mechanism is the response of blood counts to a variety of immunosuppressive therapies and dependence of counts after recovery on maintenance calcineurin inhibitors. Immune aplastic anemia lies in a spectrum of bone marrow and blood cell diseases.[12,13]

SYMPTOMS[15]

Aplastic anemia symptoms may include:

- Fatigue
- Fever
- Shortness of breath with exertion
- Rapid or irregular heart rate
- Pale skin
- Frequent or prolonged infections
- Unexplained or easy bruising
- Nosebleeds and bleeding gums
- Profuse menstrual bleeding
- Prolonged bleeding from cuts
- Skin rash
- Dizziness
- Headache

RISK FACTORS[15]

Factors that may increase your risk include:

- Treatment with high-dose radiation or chemotherapy for cancer
- Exposure to toxic chemicals
- The use of some prescription drugs such as chloramphenicol, which is used to treat bacterial infections, and gold compounds used to treat rheumatoid arthritis
- Certain blood diseases, autoimmune disorders, and serious infections
- Pregnancy, rarely

Table 1 Diagnostic criteria for AA based on the results of additional tests

Aplastic anemia (AA)	Hematological parameters
Severe aplastic anemia (SAA)	Bone marrow cellularity <25% or 25–50% with less than 30% residual hematopoietic cells two of the three criteria below: neutrophils $<0.5\times10^9$/L; platelets $<20\times10^9$/L; reticulocytes $<20\times10^9$/L
Very severe aplastic anemia (VSAA)	Similar to SAA, but neutrophils $<0.2\times10^9$/L
Non-severe aplasic anemia (NSAA)	Patients who do not meet the criteria for SAA and VSAA but with poor cell bone marrow, who have two of three criteria: neutrophils $<1.5\times10^9$/L; platelets $<100\times10^9$/L; hemoglobin concentration <10 g/dL

DIAGNOSIS OF APLASTIC ANEMIA

Diagnosis of AA is based on the detection of pancytopenia in peripheral blood and in bone marrow trepanobioptate atrophy of normal hematopoiesis, without dysplasia. Bone marrow cellularity does not exceed 25% of age norm. In peripheral blood morphology, mono- or bipenia, erythrocyte macrocytosis, and lymphocyte count within reference limits observed in the early stages of the disease. The severity of AA are classified according to the haematological values).[16]

ROLE OF HOMEOPATHY IN APLASTIC ANAEMIA[15]

- Homeopathy medicines attempt to stimulate the healthy portion of bone marrow to improve cell production. This may help to reduce the number of blood transfusions.
- Homeopathy medicines improve general vitality and wellbeing of a patient to help him fight infections.
- Homeopathy medicines can be useful to control bleeding disorder associated with Aplastic anemia.
- Homeopathy medicines are beneficial in countering side effects associated with conventional therapy.
- Homeopathy medicines have a very effective long-term beneficial effect or preventive effect in terms of countering genetic tendencies and balancing disturbed immunity that are root causes of this serious malady. The chances of relapse significantly diminish with homeopathy treatment.
- Homeopathic medicines help in maintaining the normal range of red blood cells, white blood cells, and platelets

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