

Case Report

APLASTIC ANAEMIA, COMPLETE CURE, AYURVEDIC WAY – CASE REPORT

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ABSTRACT

The incidence of aplastic anemia (AA) is on the rise in India. A very high incidence rates are reported from Uttar –Pradesh, Bihar and Delhi/NCR states, where approximately 80 - 100 new cases on / million population diagnosed annually and die. There is no cure of the disease at present. In spite of the progress in the science of medicine the understanding of AA condition is still not complete. Although the knowledge has expanded considerably but effective management of AA in general is still on unresolved mystery to the scientists. So many formulations are available in the literatures of ancient India and Ayurveda for the management of anemia. A 12 year old Indian male child (28 kg), known case of severe aplastic anemia (SAA) was recommended fresh juice of *Tinospora cordifolia*, *Azadirachta indica* and *Embllica officinalis* for 18 months along with detoxification and supportive measures. The patient is fully recovered from SAA with almost normal count. He did not receive blood transfusion since last two years. Last time, the case was transfused 1 unit whole blood on dated 21st April 2011. He has the sustained hemoglobin in increasing order, now. Blood investigation carried out recently on dated March 8th 2013 shows Hb 9.4 gm/dL (Ref. value 10.7- 15.0), total leukocyte count $5.9 \times 10^9/L$ (Ref. value 4.5- 13.5), platelet count $1.72 \times 10^9/L$ (Ref. value 1.5-4.5) and total RBC count is $3.35 \times 10^9/L$ (Ref. value 4.1-5.3). Definite improvement in eye sight of the patient has been observed. Height is reported to increase by 5 inches. The body weight observed to increase by 12 kg. Change in the color of hairs of patient noticed. The results of the study indicate that *Tinospora cordifolia*, *Azadirachta indica* and *Embllica officinalis* is to be effective in the management of SAA. Drugs have the potential to cure the disease. These are available in natural form everywhere in India free of cost or on nominal payment.

Key Words: Anti Thymoglobulin (ATG), Bone Marrow Transplantation (BMT), Cyclosporin (CSA), Blood Transfusion (BT), Pandu (anemia) Severe Aplastic Anemia (SAA), *Tinospora Cordifolia* (TC), *Azadirachta Indica* (AI), *Embllica Officinalis* (EO), Pancytopenia

INTRODUCTION

The incidence of aplastic anemia (AA) is on the rise in India. A very high incidence rates are reported from Uttar Pradesh, Bihar and Delhi /NCR states (Jain *et al.*, 2010), where approximately 80 -100 new cases on per million populations are diagnosed annually resulting into death. There is no cure of the disease at present. Combination therapy of anti thymoglobulin (ATG) and Cyclosporin (CSA) is reported to be effective in the management of AA but the estimated five year survival rate for the typical patient receiving immunosuppressive therapy is 75% (Scheinberg *et al.*, 2010). Patient who undergo bone marrow transplantation (BMT) have additional issues related to toxicity from the conditioning regimen and graft versus host disease (GVHD) (Bacigalupo *et al.*, 2000; Chan *et al.*, 2008; Bunin *et al.*, 2005; Kang *et al.*, 2004; Brodsky *et al.*, 2001). In spite of the progress in the science of medicine the understanding of AA condition is still not complete. Although the knowledge has expanded considerably about the etiology and treatment, the exact cause of the disease and effective management of AA in general is still on unresolved mystery to the Scientists. So many formulations are available in the literatures of ancient India and *Ayurveda* for the management of anemia under the chapter “pandu”. If evaluate methodically they may generate some curative or supportive remedy for the sufferers of this

Case Report

disease. We report here about a case suffering from severe aplastic anaemia (SAA) who has been given the Ayurvedic therapy.

CASES

A 12 year old Indian male child (28 kg), known case of aplastic anemia, attended the institute's outpatient department (OPD) on dated Nov. 3rd 2010. He had fever for the last one and a half month. The child was managed conservatively 11 days earlier with intravenous antibiotics and blood transfusion (BT). His blood investigation report dated 22.10.10 showed pancytopenia with haemoglobin 3g/dL, total leukocyte count $1.9 \times 10^9/L$ and platelet count $8 \times 10^9/L$. Widal test was strongly positive. The bone marrow aspiration was suggestive of marrow hypocellular. The overall morphology of the bone marrow biopsy was in favor of bone marrow aplasia. The parameters of liver function test (LFT) and renal function test were within normal limit. No organomegally detected on examination. Overall the diagnosis of the patient was made as a case of severe aplastic anemia (SAA). He had the malena and gingival bleeding. On admission blood investigation report dated Nov. 16th 2010 showed hemoglobin (Hb) 4.70 g/dL. Total leukocyte count $2.5 \times 10^9/L$ and platelet count $0.09 \times 10^9/L$. This time raised serum iron level $245.00 \mu g/dL$ noticed. Widal test which was earlier reported positive showed negative after 13 days treatment.

Management

The following strategy used in the treatment of patient-

Detoxification:

Oleation (*snehan*)- Buffalo's old *ghrit* 15 g. mixed with 125 ml. chicken soup in the morning and in the evening half an hour before meal per day for one month.

Emesis (*Vaman*)- *Piper longum* (*Pippali*) powder 500 mg with honey an empty stomach in the morning, prior and at a week's interval initially during 1st month of therapy.

Purgation (*virechan*)- *Terminalia chebula* (*haritaki*)- powder 2g. with 100ml. of cow's urine empty stomach in the morning daily for 1 month.

Palliative:

Tinospora cordifolia (*giloy*) and soft apical leaves of *Azadirachta indica* (*nimb*) (Charak, 2008; Chakrapanidatta, 2007; Gobinddas, 2006 and Yogratnakar, 1955), fresh juice (*swaras*) 30 ml. twice a day empty stomach in morning and in the evening for 18 months.



Figure 1: Plants used in the treatment -*Tinospora cordifolia*; *Azadirachta indica* and *Emblica officinalis* respectively

Emblica officinalis (*Amalaki*) fruit fresh juice 50 ml. twice a day empty stomach in morning and in the evening for 18 months.

Supportive Care:

Initially, he had received whole blood transfusion three times on dated Jan. 3rd, Feb. 16th and April 21st 2011 respectively, when Hb found $< 3g/dL$. A complaint of severe headache after BT and loose motion

Case Report

with fever noted one time, which was managed efficiently through Ayurvedic way. No severe infection observed during the therapy and entire follow up period of 1 year.

Method of Preparation

Collected 150 g. fresh stem of *Tinospora cordifolia* (TC) sized 1.5 -2.5cm diameter, cut into small pieces and 10-15g. soft apical leaves of *Azadirachta indica* (AI) added, washed thoroughly with clean water and crushed into a pulp by pouring little water in it. Put the pulp in a cloth and squeezed.

Collected 200 g. approx. fresh fruit of *Embllica officinalis* (EO) cut into small pieces separating the seeds and crushed into a pulp. Put the pulp in a cloth and squeezed.

RESULTS

Now, the patient is completely recovered from SAA with almost normal count. He has the sustained Hb gradually in increasing order. He did not receive BT since last two years. The eye sight which was earlier weak has been improved. Height increased from 4.7' to 5'. The body weight gained from 28 kg to 39.690 kg. Color of hair is observed to change into black which was grayish earlier. Blood investigation carried out recently on dated March 8th 2013 shows Hb 9.4 g/dL (Ref. value 10.7- 15.0), total leukocyte count $5.9 \times 10^9/L$ (Ref. value 4.5- 13.5), platelet count $1.72 \times 10^9/L$ (Ref. value 1.5-4.5) and total RBC count is $3.35 \times 10^9/L$ (Ref. value 4.1-5.3). He seems to enjoy his full life.



Figure 2: Photograph of the patient. A - Before Treatment; B - After Treatment

DISCUSSION

The treatment of anemia in *Ayurveda* is based on a set of principles involving life supporting measures, palliative care and detoxification therapy. Detoxification, in which oleation (use of medicated *ghrit*), emesis and purgation included, has been found most effective in the management of anemia. The main objective behind this procedure is to eliminate the factors causing disease from body preserving the immunity of the patient. Oleation is considered the most effective remedy in the treatment of *vata* diseases (Singh, 2004). Medicated *ghrit* induces the secretion of enzymes in alimentary canal. It corrects digestion and improves appetite. The accumulated waste materials/toxins that obstruct the channels causing disease are expelled from body either by the process of emesis or by the down flow action of purgation. In fact detoxification is the pre therapy in the actual line of management. It cleanses the channel, improves absorption and ensures smooth conduction of nutritive substances in the body. Palliative treatment given after detoxification (*shodhan*) therapy is believed to act more effectively and disease not relapsed once cured. Since patient was only 12 years old and had poor strength in the body, mild emetics recommended. The powder of *Piper longum* in 500 mg quantity, acted as a mild emetics. When given to the patient an empty stomach with honey desired response of one to two vomit obtained within half an hour. *Terminalia chebula* responded as a soft bowel evacuator, when given to the patient with 100 ml. cow's urine on an empty stomach in the morning ensured 1-2 times clear motion. The role of detoxification therapy has been studied in various diseases. Study showed that these procedures increased body weight, improved serum immunoglobulins, increased hemoglobin levels and normalized liver

Case Report

functions (Sahu and Mishra, 2004). There has been a strong suspicion that insecticides such as DDT and organochloride compounds, number of drugs and chemicals, wide variety of infections and immunologic diseases are responsible for cases of AA. *Tinospora cordifolia* is reported to act as antipyretics (Ikram *et al.*, 1987), immunomodulator (Atal *et al.*, 1986), immunosuppressive (Dhawale, 1984), corrects the liver function (Singh *et al.*, 1981) and eradicates the various types of infections from the body. It has an anti endotoxic property (Sharma *et al.*, 2001). Drug possibly prevents stem cell destruction and induces the formation of new hemopoietic cells in the bone marrow. *Azadirachta indica* showed a potent anti viral, anti bacterial, anti fungal, nematicidal (Akhtar and Mahmood, 1983), pesticidal (Chom, 1996), anthelmintic (Bhatnagar and Nama, 1990), and immunomodulatory (Kores *et al.*, 1993) properties in various studies. The drug is useful as liver tonic. *AI* neutralizes the effect of endotoxin in the body. *Emblica officinalis* arrests the bleeding (Tawde, 1980), heals the ulcer and act as digestive, stomachic, immunomodulator (Mitra *et al.*, 1999) and laxative. Thereby control over the disease. When patient visited initially to the institute, he had fever with widal test positive. After 13 days treatment he became afebrile and test report was found negative. Oozing blood from gums checked spontaneously within 2 month. Increased level of serum iron gradually normalized during the treatment. No adverse effect reported by the patient. The major risk factors during immunosuppressive/BMT therapy in conventional system are repeated infection and bleeding. For responders relapse is another issue. In this case patient was under therapy for 18 months and later followed up for 1 year without medicine. During this period neither any severe infection reported by the patient nor disease relapsed. He never bled once cured. He required BT initially for six month. Partial recovery observed on dated Nov. 24th 2011 (after 1 year treatment) when blood investigation report showed hemoglobin 5.40 g/dL (Ref. value 11.0 -16), total leukocyte count 9700/cu mm (Ref. value 4500-13500) and platelet count 1.52 lakh /cu mm (Ref. value 1.5- 4.5).

Conclusion

SAA can be treated effectively with *Tinospora cordifolia*, *Azadirachta indica* and *Emblica officinalis*. Drugs are available in natural form everywhere in India free of cost or on nominal payment. No side effect observed during the treatment. It is safe, economic and has the potential to cure the disease.

ACKNOWLEDGEMENT

The authors acknowledge the substantial help of staff of the Maharao Shekha Ji Ayurveda Central Research Institute, Banipark, Jaipur, especially of Prabhu Singh Rawat, Jaishankar Prasad Mishra, Sitaram Meena, Raghubir Singh and our family for their day and night tireless effort for survival of the patient. We are indebted to our Director General, CCRAS for his continuous support and necessary guidelines in the case of aplastic anemia.

Informed Written Consent

We, the authors hereby declare that written informed consent has been obtained from the patient's parents for publication of this case report and accompanying images. A copy of written consent is available for review by the Editor-in-Chief of this journal.

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Case Report

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