



EFFICACY OF SOME HOMEOPATHIC DRUGS IN MODULATING DIFFERENT BLOOD PARAMETERS IN THALASSEMIC PATIENTS: A SHORT-TERM STUDY

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ABSTRACT

Efficacy of some homeopathic drugs like *Pulsatilla nigricans*, *Ferum metallicum* and *Ceanothus americanus* reported earlier by us in rendering additional benefits to 38 thalassemic patients receiving an allopathic drug, hydroxyurea has been further tested for some other important parameters.

Patients exhibited some favorable changes in some important blood parameters like HDL-cholesterol, creatinine, lactate dehydrogenase, lipid peroxidation and reduced glutathione, but some other parameters like serum triglyceride, cholesterol, and gamma glutamyl transferase showed only insignificant changes.

Homeopathic drugs being inexpensive and without known side-effects could be recommended for use as a combined therapy along with tested allopathic drugs like hydroxyurea.

INTRODUCTION

Thalassemia is one of the most common genetic disorders in the world resulting from defects in synthesis of α/β -globin chains. It is caused by any of more than 200 point mutations and rarely by deletions (1). The mainstay treatment for the majority remains life-long blood transfusion in combination with iron chelation and hydroxyurea (HU) therapy. But the success rates of such therapies are inconsistent due to their harmful side effects and high costs. Hence, newer therapeutic approaches are still on for treating such a dreadful disease.

We already reported (2) positive responses and additional benefits shown by patients who were on a combined therapy of allopathic hydroxyurea and potentized homeopathic drugs like *Pulsatilla nigricans* 30C, *Ceananthus americanus* 30C and *Ferum metallicum* 30C, in 38 thalassemic patients. They showed positive modulations in parameters of fetal hemoglobin, decrease in serum ferritin level and reduction in spleen size as compared to only hydroxyurea (HU) treated controls. This paper deals with some additional parameters of study, some of which showed positive changes, while others were not significantly changed due to the dual mode of treatment. Further the comparative efficacy of three homeopathic drugs, namely, *Pulsatilla nigricans* (both mother tincture and 30th potency, Pul-M and Pul-30C respectively), *Ceananthus americanus* (Ceo-6C) and *Ferum metallicum* (Fer Met-30C) in modulating several blood parameters like cholesterol, HDL-cholesterol, triglyceride, creatinine and several toxicity markers like lactate dehydrogenase (LDH), gamma glutamyl transferase (GGT), lipid peroxidation (LPO) and reduced glutathione (GSH) was tested in these 38 thalassemic patients.

MATERIALS AND METHODS

The study was conducted in compliance with the protocols of Helsinki Declaration and the Institutional Ethical Committee, University of Kalyani. Informed consents were obtained from the patients who volunteered to undertake the study. The present study was conducted on the same 38 patients (2) attending the Thalassemia Foundation clinic at F-44 Footnani chamber, Corporation Place, Kol-700013 already receiving regular Hydroxyurea treatment at rates varying between 5mg/kg/day to a maximum of 20mg/kg/day depending on conditions of the patient. The patients who presented themselves were medically checked up (for blood pressure, pulse rate, possible enlargement of spleen, liver, hemoglobin content, period between successive blood transfusions, etc.) by two qualified homeopathic doctors in our team. They were also asked about their general physical conditions like appetite, bowel clearance, sleep, urination, etc on a subjective basis, and whether any of these were, in their opinion, perceivably ameliorated. The summarized data shown in the present study were for the same period of three months as reported earlier.

5 ml of blood was drawn from each patient by venipuncture near the arm joint in glass vials containing EDTA (anti-coagulant). Serum was extracted by centrifugation at 1000g and by collection of the supernatant.

TEST PROTOCOLS

Triglyceride, cholesterol, HDL-cholesterol, creatinine, GGT, LDH, LPO and GSH were assayed from the serum samples according to the protocols described earlier (3).

STATISTICAL ANALYSIS

The levels of significance before and after 2 months of drug administration were determined by Student's 't' test.

RESULTS

The data on different blood parameters and toxicity markers have been presented in Figures 1a-h. In the Pul-M (Pulsatilla mother tincture) fed group, the differences were statistically significant in case of creatinine level, LPO ($p < 0.05$) and GSH contents ($p < 0.01$) after 3 months of administration of the drug, whereas in the Pul-30C fed group the differences in LDH level and GSH contents were found to be statistically significant ($p < 0.05$). In case of Fer Met-30C and Ceo-6C fed groups statistically significant data were observed in creatinine level ($p < 0.01$) in the former group and in HDL-cholesterol ($p < 0.05$) and LPO ($p < 0.001$) in the latter group after 3 months of drug administration (Fig 1a-h). But the differences between data scored before and after drug administration were not significantly different for the other parameters (Figs 1a-h). Moreover the general health and spirits of the patients appeared to have improved in majority of them and the enlarged spleen in few patients also showed some reduction in size after this combined treatment.

DISCUSSION

In our earlier report (2), several important protocols were considered to arrive at the conclusion that homeopathic drugs, when administered in combination with HU, brought additional benefits to the patients in respect of augmentation of fetal hemoglobin synthesis, decrease in serum ferritin level, and spleen size. In the present study, it shows that these homeopathic drugs also indicate their benefits in terms of reduction of LPO, LDH and creatinine, and increase of GSH and HDL-cholesterol. Therefore, these drugs virtually show positive modulations in all parameters that indicate their ability to ameliorate sickle cell disease and β thalassemia (4). In fact, creatinine is an effective indicator of kidney functioning status. Pul-M showed decrease in creatinine level, indicating thereby its ameliorating effects on kidney.

Further, the positive modulations in parameters like LPO and GSH indicated the ability of the combined therapy to reduce oxidative stress and possible necrotic damage to the vital organ like liver, by enhancing cellular defense. Similar ameliorative ability against kidney malfunction and oxidative stress, that was also observed in Fer Met-30C and Ceo-6C fed groups.

In view of our previous and the present findings, these homeopathic drugs in combination with HU have the possibility of being used as an interim therapeutic measure for combating this dreadful disease. The low cost and no known side-effects of homeopathic drugs will particularly help poor patients inhabiting developing countries in combating this dreadful disease more successfully.

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