



## TRIAL - 2

### Study of Effect of Capsule of Wheat Grass In $\beta$ - Thalassemia Major Patients

#### SUMMARY :

The present prospective interventional randomised control study was carried out in 30 beta thalassemia major patients of both sexes , aged 2 to 18 years of age in Department of Pediatric, Sir T. Hospital, Govt. Medical college Bhavnagar from December 2008 to July 2010.

All the enrolled patients were divided in two groups, treatment and control group. In treatment group, 3 capsules of wheat grass (Green Era Wheat Grass Capsules 320 mg was supplied by Green Era Foods & Nutraceuticals - Bhavnagar) were given daily for six months while in control group nothing was given.

Monitoring includes pre transfusion CBC, Retic count, Serum level of ferritin; total, direct and indirect bilirubin; SGPT, SGOT, ALP, Albumin, LDH, Amylase, CPK- MB, Creatinine and Blood urea level at the beginning and end of the study. Pre transfusion Hb and amount of blood transfusion was recorded during each visit of transfusion. In both groups, pre transfusion Hb and amount of blood transfused in previous six months were calculated.

Mean and standard deviation were calculated for all the quantitative data and results were compared using paired t- test in intra group comparison and unpaired t- test in inter group comparison. p value < 0.05 was considered statistically significant.



**The results were as follows:**

- Patients were remained under transfused due to peripheral rural native and poor socio-economical class.
- In treatment group, there was statistically significant increase in pre transfusion Hb level and decrease in amount of blood transfusion during study period.
- Increase in pre BT Hb and decrease in blood transfusion may be due to wheat grass induced induction of fetal haemoglobin, anti oxidant properties of wheat grass which decreases hemolysis of RBCs or structural similarities between haemoglobin and chlorophyll.
- In control group there was no significant change in prê transfusion Hb and amount of blood transfusion during study period.
- In treatment group, there was decrease in platelet count, retic count and serum LDH level. In control group there was no change in retic count and platelet count, but LDH level was increased.
- Indirect and total serum bilirubin were decreased in treatment group while increased in control group.
- In both groups, there was increase in SGPT, SGOT and Serum Amylase level, and decrease in serum albumin level. (Only increase in amylase level in treatment group was statistically significant).
- CPK –MB level was decreased in treatment group, while increased in control group (statistically non significant).
- No other untoward effect of Green Era -wheat Grass capsule was recorded.



## ***CONCLUSION:***

- Green Era Wheat Grass is a newer and effective modality of treatment in the management of Thalassemia major patients, especially for under transfused patients.
- Green Era Wheat Grass capsule is readily acceptable with good compliance on short term (6 months).
- Green Era Wheat Grass capsule improves haemoglobin levels (1 g/dl) and decreases transfusion (10 ml/kg/6 months) in Thalassemia Major patients during 6- month study period.
- Green Era Wheat Grass capsule decreases haemolysis of RBC.
- Green Era Wheat Grass capsule has beneficial effect on biochemical profile of heart.
- Green Era Wheat Grass capsule has no effect on the biochemical renal and liver profile.

## ***RECOMMENDATION***

Green Era Wheat Grass Capsule is a cheap, simple and readily available substance without any side effects, which has shown good results to maintain higher level of Hb in patient with Thalassemia major in our study. On the basis of our study, we recommend the use of Green Era Wheat Grass Capsules in Thalassemia major patients.

Note : Do not use this data without our permission.