INTRODUCTION

The thalassemias are heterogenous group of genetic disorders of hemoglobin synthesis . All of which result from reduced rate of production of one or more of globin chains of hemoglobin . They are divided into α or β thalassemia according to defect in globin chain synthesis ***(Aessopos et al., 2001).***

Beta-Thalassemia is a significant public health problem in Egypt where over 1000 of the annual 1.5 million newborns are expected to be affected with this disorder ***(Khalifa et al., 1997).***

Thalassemia is a growing global public health problem with an estimated 900,000 births of clinically significant thalassemia disorders expected to occur in the next 20 years ***(Elliott, 2005).***

Thalassemia, which is caused by a decrease in the production of globin chains, affects multiple organs and is associated with considerable morbidity and mortality. Accordingly, lifelong care is required, and financial expenditures for proper treatment are substantial (***Karnon et al., 1999***).

Primary management of patients with thalassemia major can be considered under 3 major heading, transfusion therapy, iron chelation therapy and splenectomy ***(Thuret, 2001).***

Regular blood transfusion eliminates the complications of anemia ***(Weatherall and Clegg, 1996).*** However, transfusion results in a " second disease " while treating the first, that of unavoidable accumulation of tissues iron that, without treatment, is fatal in the second decade of life ***(Cohen AR. et al., 2004).***

Primary hypothyroidism is one of the most frequent complications observed in patients suffering from thalassemia ***(Filosa et al., 2006)***

Thalassemic patients may develop thyroid disorders with varying degrees of severity ***(Ayodink et al., 2002).***

The use of iron chelating drugs has been shown to delay the development of iron induced damage of cardiac and liver tissues, resulting in improved survival. The ability of desferoxamine to prevent damage to endocrine functions is less clear ***(sperling ,et al., 2004)***.