INTRODUCTION

Hemolytic anemia is anemia due to reduced red cell life span. The abnormal breakdown of red blood cells is either in the blood vessels (intra vascular hemolysis) or elsewhere in the body (extra vascular). It has numerous possible causes, ranging from relatively harmless to life-threatening. Hemolytic anemias can be classified to immune and non-immune, acute or chronic and hereditary or acquired. Management depends on the cause and nature of the breakdown. Hemolytic anemia represents approximately 5% of all anemia's ***(Paul Schick 2009)***

The overall incidence of death is low in cases of hemolytic anemia. However, older patients and patients with cardiovascular impairment are at an increased risk. Morbidity is dependent on the etiology of the hemolysis and the underlying disorder such as sickle cell anemia or malaria. The most common complications are iron overload from frequent blood transfusions which leads to heart, liver and endocrinal damage, and transfusion transmitted infections as viral hepatitis ***(McLeod et al., 2009)***

Genetic conditions of the Red Blood Cell (RBC) membrane include hereditary spherocytosis and hereditary elliptocytosis. ***(Stiene-Martin, 2007)***

Genetic conditions of the RBC metabolism (enzyme defects) include glucose-6-phosphate dehydrogenase (G6PD) deficiency or favism, and Pyruvate kinase deficiency. ***(Stiene-Martin, 2007)***

Genetic conditions of hemoglobin include Sickle cell anemia and Thalassemia. . ***(Stiene-Martin, 2007)***

Acquired hemolytic anemia can be further divided into immune and non-immune mediated. . ***(Stiene-Martin, 2007)***

Current management of chronic hemolytic anemia is regular blood transfusions, iron chelation therapy, Folic acid supplements, hemtopoietic stem cell transplant is considered as a definite cure. ***(Henry,2007)***

Drugs stimulating gamma chain synthesis, thus increasing hemoglobin F levels are introduced in Sickle cell disease to reduce the concentration of Hb S, as well as in thalassemia intermedia to increase overall Hb%. These include hydroxyurea, and the newly introduced formulation of 5-azacytidine (Decitabine). Decitabine has been found to be very effective in increasing overall hemoglobin and it is easier to tolerate than similar previous drugs ***(Koshy et al., 2000)***

Desferrioxamine (Desferal) has been the standard iron chelator for decades, however, its inconvenient mode of administration has always been a cause of non-compliance. Deferriprone (Ferriprox, Kelfer) and Deferasirox (Exjade), are newly introduced oral iron chelators that proved efficacious and more acceptable. Further studies are being performed to determine the long-term benefits and risks of Exjade ***(Cappellini et al., 2006).***

AIM OF THE WORK

The aim of this work is to study the prevelance of delayed growth, delayed puberty and HCV infection in patients with hemolytic anemias in Qalyubia governorate**.**