Introduction

In late fetal life and infancy , the entire available bone marrow is used in the formation of red blood cells, supplemented by extramedullary erythropoiesis in the liver and spleen. As the child becomes older and the red cells life-span increase, erythropoiesis is withdrawn from the liver, spleen, and then gradually from the diaphysis of the long bones. This process of withdrawal will not occur if a need exists for extra erythropoiesis e.g. increased destruction of red cells **(*Stoker, 1997*)**.

Chronic haemolytic anaemias, however, in which red blood cells suffer extensive destruction , are the most severe anaemias. The great majority of these diseases are caused by a hereditary defect that may produce abnormal red cells (in shape and fragility) or abnormal haemoglobin **(*Watt and Cobby,1998*)**.

The majority of old children and adult patients with haemolytic anaemias exhibit some radiological changes of their life-time . Generally these changes can be classified under two major categories :

- Skeletal changes
- Visceral changes

As regards the skeletal lesions :

- Lesions due to hyperplasia of the bone marrow which lead to absorption, osteoprosis, softening and change in shape of the bones, specially the bone containing active marrow **(*Sharrard , 1993*)** .
- Lesions due to infarction of the bones as a result of thrombosis (as in sickle cell anaemia) (***Rao etal, 1989***).

Conventional plain film radiography represent the initial study of choice when chronic haemolytic anaemia is suspected. This image provide an overview of the osseous pattern and may be diagnostic when spesific features are present **(*Voglar and Murphy,1988*)**.

MR is a highly sensitive alternative to plain films, and other imaging modalities (*CT*, and *radionuclide studies*) for the imaging of normal and abnormal marrow and can characterize differences between fatty, fibrotic, cellular, hypercellular, and haemosiderotic marrow **(*Steiner etal, 1993*)**.

As regards the visceral changes :

The chronic haemolytic state is reflected by the development of characteristic and diagnostic radiological abnormalities affecting the soft tissues involved by extramedullary haematopoiesis **(*Watt and Cobby, 1998*)**. Also, any system in the body can be affected by the pathology of the disease **(*Bunn,1994*)**.