INTRODUCTION

Blood probably originated as a simple saline solution similar to sea water, cellular components with specialized functions coming later. Among the principal function of blood cells is transport of respiratory gases, (Behrman and Vaughan, 1987).

Anaemia is one of most common medical conditions that may influence perioperative management or outcome. Frequently, anaemias are encountered unexpectelly in apparently healthy patients and must be evaluated, if not treated, before proceeding with anesthesia and surgery, (Dewhirst and Glass, 1990).

Anaemia is a numerical deficiency of erthrocytes caused by either too rapid loss or too slow production of the cells. As a result, numerical concentrations of haemoglobin are reduced and the oxygen carrying capacity of blood is decreased, (Stoelting, 1988).

The response to various physiological perturbations depends mainly upon how much hemoglobin is available and whether circulating volume is adequate. However, in the hemoglobinopathies, the function of the hemoglobin itself may be altered, leading to inadequate oxygen delivery and carbon dioxide removal in spite of apparently adequate amount of hemoglobin, (Dewhirst and Glass, 1990).

Familiarity with erythropoiesis and erythrocyte structure and function is necessary to understand the pathogenesis of

the various anaemias as well as to develop an orderly approach to diagnosis and management, (Bunn, 1991).

In the setting of acute blood loss, the hemogram remains unchanged until the blood volume begins restored. Red cells indices reveal a normochromic, normocytic pattern. Furthermore, blood loss may be exacerbated by anaesthetic agents themselves, (Dewhirst and Glass, 1990).

Anaemia due to intravascular hemolysis of erythrocytes is characterized by rapid reductions in the hematocrit and elevated plasma concentration of bilirubin. Normal erythrocyte survival time of 90 days to 120 days is greatly shortened in patients with hemolytic anaemia. Causes of hemolysis include abnormalities of erthrocyte membranes, enzyme defects, and alternations in the normal structure of hemoglobin, (Stoelting, 1988).

The hemoglobinopathies may be qualitative disorders of structurally abnormal of hemoglobin, as in sickle cell disease, or they may exhibit a quantitative deficiency in the amount of normal hemoglobin produced, as in the thalassemias, (Dewirst and Glass, 1990).

A history of decreased exercise tolerance, often characterized as extertional dyspnea, is a frequently clinical sign of chronic anaemia. A functional heart murmer and evidence of cardiomegaly may be detected during performance of the physical examination. Assessment of erythrocyte production can be made from the reticulocyte count in peripheral blood, (Stoelting, 1988).

However, because anaemia can be a hallmark of many other diseases possibly affecting perioperative anaesthetic management, the preoperative presence of anaemia requires a search for, and treatment of, the underlying cause, (Miller, 1990). It should- when possible- be treated medically before operation as it is doubtful to do major elective surgery with a haemoglobin concentration of less than 8 gm%. In anaemia, grave hypoxia may not be accompanied by cynosis, (Atlkinson, 1987).

The time of most danger to patient may be the early recovery room period, during which time oxygen delivery to lung is perhaps at its worst. So, the post-operative management includes continues oxygen administration, adequate hydration, and prophylactic antibiotic therapy to minimize pulmonary infections, (Miller, 1990).

The aim of this study is to represent the important of anaemia, its effect on general condition of the patient and the management of such patient during anaesthesia for minimized morbidity and mortality rates and influence of anaesthetic agent on different types of anaemias.