Introduction

Despite the widespread clinical success of surgery; hemorrhage is still an important complication. During surgical procedures blood will clot and secure hemostasis, but if clotting does not occur, this will lead to undesirable effects that may endanger patient's life. Although most patients who show signs of continuous bleeding perioperatively will have a surgical cause for their hemorrhage; at some point in time the patient hemostatic mechanism must come into question; the patient may have a pre-existing bleeding disorders. Exclusion of coagulation defects before the induction of anesthesia facilitates the differential diagnosis of intra-operative bleeding ***(Hender and Erhardtsen, 2003)***.

Coagulation disorders can be classified into inherited (hereditary), acquired and intermediate disorders of hemostasis. Inherited (Congenital-Hereditary) disorders of hemostasis are caused by deficient activity of one of plasma clotting factors needed for normal blood coagulation. Hemophilia "A" and "B" are the most common causes in this group as they account for 85-90% of cases. Others are hemophilia "C" para-hemophilia and vascular hemophilia "Von-Willebrand's" disease ***(Stoelting and Dierdorof, 2002)***.

Acquired disorders of hemostasis may result from 3 causes which are (1) impaired or faulty synthesis of coagulation factors; (2) increase consumption of coagulation factors; and (3) activation of factors that inhibit coagulation function. Hemorrhagic shock, disseminated intravascular coagulation

"DIC", massive blood transfusion, burn, vit K-deficiency and drugs induced hemorrhage are the most common causes of acquired disorders of hemostasis. Acquired disorders of hemostasis may form serious problems that may be incompatible with patient's life and form a great challenge to the anesthetists ***(Mann et al., 2003; Hender et al., 2003)***.

Intermediate disorders of hemostasis includes both disorders of hemostasis and disorders of thrombosis and are most common in renal disease, liver disease, systemic lupus erythematosus, hematological malignancy, and heparin-induced thrombocytopenia ***(Ahonen and Jokela, 2005)***.

The evaluation of a case of coagulopathy should be performed in a logical sequence. A careful detailed history and good physical examinations are so important and may uncover clues to the nature of disorders, and both will give help to facilitate the choice of laboratory studies. History of drug intake that affects coagulation or platelet function is another causative factor ***(Barash et al., 2001; Hender, 2006)***.

A coagulation profile that will detect most abnormalities includes measurement of prothrombin time (PT), activated partial thromboplastin time (aPTT), platelet count, bleeding time, fibrinogen level and fibrin degradation products (FDPs) ***(Miller, 2000; Hender, 2006)***.

On the other hand, the hypercoagulable state is a coagulopathy that must be known as regard diagnosis, treatment and peri-operative anesthetic management. So, the anesthetist

should be oriented with the common coagulation disorders, how to diagnose and how to manage peri-operatively ***(Ahonen and Jokela, 2005)***.

The aim of this essay is discussion of the normal hemostatic and coagulation mechanisms, discussion of causes of coagulation disorders and how to discover, evaluate and manage their peri-operative complications.