SUMMARY

The deep venous thrombosis develop most commonly in the lower limb, mostly, in the left one, mostly, in the soleal venous sinuses. The upper limb is almost immune from post operative vein thrombosis, mostly due to the speed at which the blood flows in the upper limb; which is double what is in the lower limb veins, therefore measures to combat venous stasis in the lower limbs ought to reduce the risk of deep vein thrombosis.

The available methods of avoiding a thrombus in the deep veins of the lower limbs and subsequent pulmonary embolus after surgical operation are not successful.

The prevention of deep vein thrombosis by routinely abolishing the power of the blood to clot throughout the entire venous system at the body by giving anticoagulant drugs is clumsy because the risk is virtually confined to the veins of the lower limbs. Morever, this method carries a complication of its own as spontaneous haemorrhage.

The risk of deep vein thrombosis which occurs while the patient is undergoing the operation can be reduced by routinely elevating the patient's legs I5° above the horizontal; or by routinely stimulating the calf muscles by galvanic current at an electrical pressure of I20 volts and a rate of 30 shock per minute. Venous stasis is avoided by these measures.

From the most common prophylactic measures against occurrence of deep venous thrombosis, five methods are in common use: Aspirin, Low molecular weight dextran, Minidose of heparin, Bilateral intermittent pneumatic compression, and Elastic compression stockings. Minidose heparin and elastic stockings, gives good prophylaxis than heparin alone. Also, intermittent pneumatic compression, gives a good degree of prophylaxis as it was found that beside, reducing venous stasis, it also stimulates fibrinolysis.

Patients who are at very high risk of developing venous thrombosis and embolisation in the post operative period (Old age, Severe trauma or Major surgery, Previous

history of thromboembolism, and Obesity) should be given prophylaxis by full perioperative anticoagulation. Patients at very low risk (Child having Minor operation), do not need prophylaxis. For the majority of surgical patients who fall between these two extremes , the benefits of prophylaxis remains in question.

A carefull history and examination should be made in all patients with symptoms and signs of acute venous thrombosis to exclude other conditions. Less than 50 per cent with these signs and symptoms have venous thrombosis. If venography is the only objective test available; it should be performed on all patients with leg symptoms and signs compatible with venous thrombosis.

Clinical suspicion of venous thrombosis can be excluded or confirmed by performing impedance plythesmography alone or with fibrinogen leg scanning. If impedance plythesmography is positive (in absence of conditions known to produce a false positive results), a confident diagnosis

of venous thrombosis can be made and the patient treated appropriately. If it is negative, the clinician has two alternatives; Either to repeat it Or to do Iodine -I25- fibrinogen scanning of the leg to detect active venous thrombosis. The use of impedance plythesmography alone is based on the supposition that calf vein thrombosis which is not detected by impedance plythesmography does not require treatment unless it extends.

The most common complication of deep venous thrombosis is pulmonary embolism; which can be prevented by two approaches:

. Primary prophylaxis using drugs or physical therapy which are effective against deep venous thrombosis especially of lower limb, which are the main source of emboli.

. Early detection of subclinical venous thrombosis by screening patients (e.g. postoperative leg scanning with iodine -I25- fibrinogen) which provide the opportunity for treating silent thrombosis early before they embolize. Primary prophylaxis is likely to be the more effective and

less expensive approaches.

Treatment of venous thromboembolism, essentially by anticoagulation; initially by heparin either by intermittent intravenous heparin in a dose of 5000 I.U./ four hours (30.000 I.U./ day), or continuous intravenous heparin adjusted to maintain partial thromboplastin time between I.5 and 2 times the preheparin control value, and this is prefered because the intermittent intravenous heparin therapy is associated with higher risk of bleeding.

Heparin therapy should continued for 7 - I0 days, for a thrombus to adhere to the vein wall.

The initial heparin therapy is followed by a long term anticoagulant (oral) therapy, warfarin sodium in a dose of I0 mg per day, after 7 days of heparin therapy, and both drugs are administered together for at least 4 to 5 days. After initial dose of warfarin the dose is adjusted by monitoring prothrombin time at I.25 times the control value, and this regimen continued for at least 2 to 3 months.

Fibrinolytic drugs as streptokinase and urokinase are used to ensure lysis of thrombi and emboli, and restore circulation, but it has its own complications and contra-indications.

Surgical interference is limited to the special complicated cases and include: Transposition of valves , Thrombectomy, and Inferior vena caval interruption.