Introduction

Venous thrombeoembolism is a common disorder, the estimated annual incidence of symptomatic venous thromboembolism is 117cases per 100,000 population ***(Silverstein et al 1998).***

Approximately one third of patients with venous thrombosis have a pulmonary embolism, whereas two thirds have DVT alone ***(White 2003)***.

The incidence rate of isolated deep venous thrombosis, is around 50 per 100,000 person-years ***(Fowkers 2003)***

Because the clinical diagnosis of deep venous thrombosis is highly inaccurate, particularly when the findings are subtle or when only calf vein thrombosis is present, it is essential to correlate the clinical impression with objective tests ***(Hirsh et al., 1986)***.

Patients with suspected deep vein thrombosis (DVT) have non specific signs and symptoms; and missed DVT may result in fatal pulmonary embolism, so a selective and efficient process is needed for diagnosis of deep vein thrombosis ***(Philip, 2006).***

Deep venous thrombosis (DVT) of lower extremity is a commonly encountered clinical problem that can lead to potentially fatal outcome, if pulmonary embolism develops ***(Bill, 2004).***

Ascending venography, while long considered the standard of reference for the diagnosis of DVT, is perceived as invasive and therefore is less routinely used ***(Charles2001)***

Magnetic resonance imaging (MRI) has demonstrated excellent sensitivity in the diagnosis of proximal deep venous thrombosis when compared with ascending Phlebography, but its difficult availability, cost, and metallic implants, limit its application ***(Carpenter et al 1993).***

Duplex Scanning which combines real-time two-dimensional Ultrasound imaging with Doppler Ultrasound (continuous or pulsed-wave) has been introduced , to evaluate the venous system with excellent sensitivity and specificity ***(Rooke et al., 1990)***.

It has an excellent diagnostic accuracy in patients with clinically suspected DVT ***(Comerota et al., 1988).***

The accuracy of this technique for diagnosing femoral or popliteal deep venous thrombosis approaches (100%) ***(Lensing et al., 1989).***

The D- Dimer which is a degradation product resulting from fibrinolysis has been proved to be useful in evaluating patients with suspected DVT ***(Bauer et al., 1993).***

D- dimer concentrations are raised in the setting of acute deep venous thrombosis, and normal concentrations are expected in the absence of acute venous thrombosis unless other coexistent conditions that activate the coagulation system are present ***(Frost, 2003).***

When a D-dimer assay is negative and a clinical prediction rule suggests a low probability of DVT, the negative predictive value is high enough to justify foregoing imaging studies in many patients ***(Jodi 2007)***

D-Dimer test is a good Exclusionary test for patients with suspected DVT ***(Perrier et al., 1999).***