

LOWER LIMB DEEP VEIN THROMBOSIS IN SURGICAL UNIT, TEACHING HOSPITAL PERADENIYA: RISK FACTORS AND COMPLICATIONS

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Introduction

Deep vein thrombosis (DVT) is a common yet often under-recognized condition. The most frequent location of DVT is in the lower limbs. Various inherited and acquired risk factors are known to predispose to DVT. The important acquired risk factors for DVT include advanced age, prolonged immobility, surgery, pregnancy, hormonal contraceptives, obesity and malignancy (Maly *et al.*, 2009). Venous thrombosis of the deep veins is a serious life threatening condition that may lead to sudden death in the short term due to pulmonary embolism or in the long term morbidity due to the development of a post thrombotic limb and venous ulceration (Russels *et al.*, 2004). The sequale can be prevented or minimized by early diagnosis and anti coagulation (Wijeratne and Sheriffdeen, 2002). The diagnosis of symptomatic DVT is well established using duplex scanning with a sensitivity of 100% and specificity of 98% for proximal DVT and 94% sensitivity and 75% specificity for distal DVT (Oliveria, *et al.*, 2008). The most important step for the treatment of DVT in the leg and pelvis is the immediate and sufficient anticoagulation by subcutaneous administration of low molecular weight heparin.

Objectives

The purpose of this study was to determine the prevalence of acquired risk factors and complications in patients with lower limb DVT in our unit.

Materials and Methods

Data was collected prospectively from 124 patients with lower limb DVT who attended Surgical unit, Teaching Hospital, Peradeniya from November 2006 to June 2009. Protocol based documentation of history, physical examination, investigations and management of these patients was made. The diagnosis of DVT was confirmed by duplex ultrasound scanning.

Results

We studied 124 patients with DVT in 134 lower limbs of which 81 (65.32%) were female and 43 (34.67%) were male patients. The mean age was 43.83 years (SD \pm 14.83) ranging from 6 months to 90 years. Of the study group 87 (70.16%) patients had acute DVT, 24 (19.35%) patients had chronic DVT and 13 (10.48%) patients had recurrent DVT. Sixty seven (54.03%) patients had identifiable risk factors. The mean age of them was 44.76 years (SD \pm 15.59) ranging from 6 months to 90 years. Fifty seven patients (45.9%) did not have identifiable risk factors. The mean age of them was 40.59 years

(SD \pm 13.69) ranging from 15 years to 75 years.

In those with risk factors 24 (35.82%) had immobilized conditions, 20 (29.85%) were post operative patients, 13 (19.4%) were using hormonal contraceptives, 12 (17.91%) were smokers, 9 (13.42%) were pregnant, 8 (11.94%) were obese, 7 (10.44%) had other diseases like nephrotic syndrome that predispose to DVT, 6 (8.95%) had malignancy, 5 (7.46%) had family history of DVT, 1 (1.49%) had amputation of other lower limb. Thirty patients (24.19%) had more than one identifiable risk factor.

In the post operative group 12 (60%) were related to surgeries in the pelvis and hip, 2 (10%) to abdominal surgeries, 3 (15%) to femoral venous cut down and 3 (15%) to other major surgeries.

When considering the post operative state 9 patients (45%) developed DVT during 1st postoperative week, 8 patients (40%) during 2nd post operative week to one month period and 3 patients (15%) after one month of the surgery.

In those using hormonal contraceptives 5 (38.4%) were using oral contraceptive pills and 9 (69.23%) were using Depo-Provera injections.

Only 17 (12.9%) patients developed clinically detectable complications. Of these 8 (6.45%) had pulmonary embolism of whom 2 died. Nine (7.25%) developed chronic venous ulcers in the lower limbs. In 6 (75%) patients with pulmonary embolism the

veins involved were those proximal to the popliteal vein. All the patients with complications had more than one venous segment involvement.

Discussion

Immobilized condition including postoperative state, use of hormonal contraceptives, smoking and pregnancy were the commonly identified acquired risk factors in the study group. In those without acquired risk factors, the predisposing factor for DVT may be a thrombophilic disorder. The presenting age of them is (mean 40.59, SD 13.69) younger to those with risk factors (mean age 44.76, SD 15.59). Even in those with acquired risk factors there could have been undetected underlying thrombophilic disorder which make them more susceptible to DVT. Thrombophilia could be due to deficiency of one of the main inhibitors of the clotting system-protein C, protein S, or antithrombin III. Further research is required in order to investigate the deficiencies of these factors.

Clinically significant thrombo-embolic complication rate was rather low in our unit and complications occur when thrombi are proximal and multisegmented.

Conclusion

The prevalence of acquired risk factors was 54% and clinically detectable complication rate was 17% in the study group.

References

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