

SOLUBLE P-SELECTIN AS A DIAGNOSTIC AND PROGNOSTIC BIOMARKER IN RECURRENT UNPROVOKED VENOUS THROMBOEMBOLISM

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ABSTRACT

Introduction

Recurrent Venous thromboembolism (VTE) is a common medical problem with unsatisfactory laboratory parameters for diagnosis and follow up, new modalities of investigation like cell adhesion molecule soluble P-Selectin (sP-selectin) can help to differentiate patients into high and low risk group.

Aim of the Study

To assess the efficacy of sP-selectin as a biomarker for diagnosis and prognosis of recurrent unprovoked VTE patients.

Patients and Methods

This is prospective cohort study was carried out from March 2013 to March 2015 in (Internal medicine, chest and anesthesia & surgical ICU departments, Tanta university hospital, Egypt) on 78 patients of both sexes and age >18years; All patients admitted the hospital suffering from DVT or pulmonary embolism (PE). DVT was confirmed by imaging techniques: venography or compression ultrasonography, PE by ventilation/perfusion lung scan. They were initially treated with low molecular weight heparin (LMWH) then with warfarin as an oral anticoagulant (OAC) for 3-6 months. They were observed for two years every three-month in the first year and every six months in the second year or till the time of recurrence of VTE. We evaluated the serum levels of sP-selectin at the time of the first thrombotic event and at 3-12 weeks after withdrawal of anticoagulant therapy.

Results

Risk of recurrence was increased among patients with sP-selectin levels above 75th percentile at first event of VTE (0.96-fold) (95% CI 0.943-0.977, $P < 0.001$). Interestingly, the cumulative probability of recurrent VTE was higher among patients with plasma levels of sP-selectin above the 75th percentile (>253 ng/ml) compared to those with lower level (≤ 253 ng/ml) ($P = 0.066$) by log-rank test.

Conclusions

sP-selectin is a useful biomarker help in diagnosis and can predict the prognosis of recurrent unprovoked VTE patients.

KEYWORDS: Venous Thromboembolism, sP-selectin

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