

INCIDENCE AND RISK FACTORS FOR DEEP VEIN THROMBOSIS IN AN UNIVERSITY HOSPITAL

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ABSTRACT

Objetives: Evaluate patients profile admitted with suspected venous thromboembolism of an university hospital from August/2015 to July/2016 and describe the therapeutic used. **Methods:** 42 patients was admitted with clinic suspected and verifying their confirmation by complementary exams. Epidemiological profile and treatment was analyzed. **Results:** 20 patients with diagnose confirmation formed group A, and group B by 22 patients without confirmation. Group A had 51,65 years old average, being half female. Obesity was most common risk factor (30%) on this group followed by varicose veins and infection (25%). The most frequent treatment observed was low molecular weight heparin plus warfarin (55%). **Conclusion:** It's needed to make a prospective study about risk factors to take out some bias about lack of active research and failure in recording data. It's important to extend the number of patients in the study and develop a protocol to standardize diagnose and treatment at this service.

Key words: venous thromboembolism, risk factors, epidemiology

INTRODUCTION

Deep venous thrombosis is the greatest cause of in-hospital deaths worldwide and, paradoxically, the most avoidable.¹ Despite improved prophylaxis regimens, however, the annual incidence of VTE has been relatively constant, at about 1 event per 1000 persons-year since 1979.² Among elderly patients, annual rates of mortality due to deep venous thrombosis and pulmonary thromboembolism are 21% and 39% respectively.³ It

has been estimated that 25% to 50% of patients with deep venous thrombosis will develop post thrombotic syndrome, which can cause considerable reductions in quality of life.⁴

An accurate diagnosis of DVT is extremely important to prevent potentially fatal acute complication of pulmonary embolism (PE) and long-term complications of post phlebitis syndrome and pulmonary hypertension. It is also important to avoid unjustified therapy with anticoagulants with associated high risk of bleeding in patients misdiagnosed with the condition.⁵ Although awareness of VTE as an important public health issue is growing, our understanding of the clinical epidemiology of this disease state remains limited. The most frequently cited estimates of the magnitude of VTE are based on data collected more than a decade ago. Knowledge about the epidemiology of VTE is critical to the effective application of current and future diagnostic and therapeutic interventions⁶.

Since knowledge of the patient's risk profile may help in the identification of individuals who are likely to benefit from VTE prophylaxis,⁷ the aim of the present epidemiologic study was to elucidate the factors associated with DVT in inpatients, with special attention to trauma patients.

PURPOSE

The main goal of the study is to identify and evaluate the profile of patients with DVT in a regional university hospital, to identify the main factors related to the clinical picture and risk factors, as well as to analyse the therapeutic behaviours taken in relation to these patients.

METHODS

The methodology used in the present study was a retrospective case study with a medical record of patients that checked in the emergency room of a regional university hospital in Brazil with initial diagnosis of VTE or related diseases, in addition to patients who received a final diagnosis of VTE. The period of interest was August 2015 to July 2016, comprising a year. Data related to the profile, risk factors and behaviours taken on each patient were analysed. The total number of patients was 42 patients.

COLLECTED DATA: Epidemiological characteristics (age, sex, residence city); Risk factors associated with VTE (previous surgery, trauma, oral contraceptive, hormonal repositioning, use of corticosteroids, previous DVT, sedentary lifestyle, smoking, immobilization, obesity, dyslipidaemia, heart failure, chronic obstructive pulmonary disease, diabetes mellitus, renal insufficiency, hepatic failure, stroke, nephrotic syndrome, acute myocardial infarction, arrhythmia, inflammatory bowel disease, autoimmune disease, dehydration, varicose veins, arterial insufficiency, infection, neoplasm); Conduct in patients with VTE.

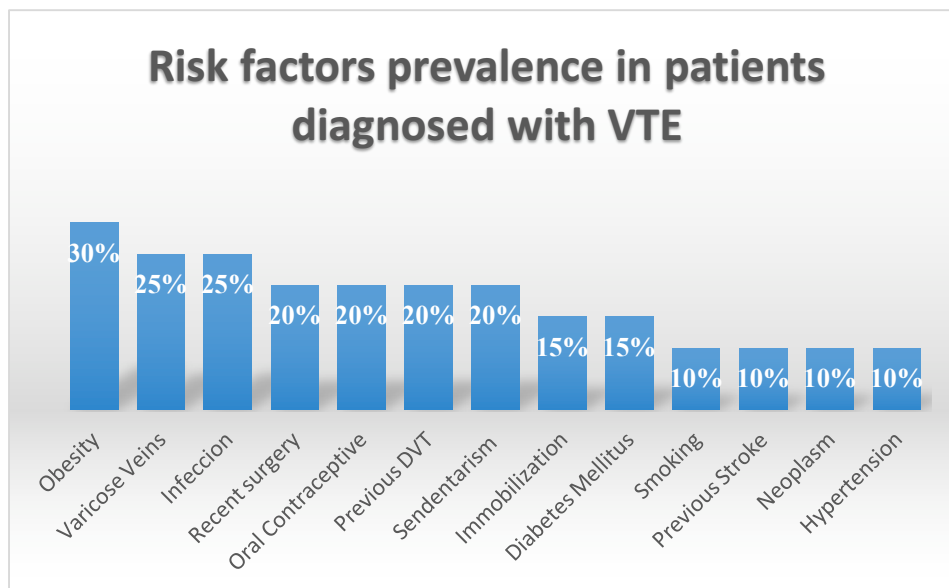
RESULTS

From 42 patients, 20 had the diagnose confirmed and formed the group A. The 22 patients that had discarded the disease was part of group B.

In group A, the result found was an average of 51,65 years old, being half female, only 10% of them had PE, the others were diagnosed with deep vein thrombosis (DVT). The risk factor more common in this group was obesity (30%) followed by varicose veins and infection, both observed on 25% of the group. Also, risk factors, such as previous recent surgery, oral contraceptive, previous DVT, sedentary lifestyle, diabetes mellitus (DM) and immobilization, was found in 15-20%. Others aspects analysed are prevalent in 10% or less in the group.

About group B, 59,1% is female, and the group age average is 56 years old. In this group, the most prevalent risk factor was trauma (31,8%), followed by DM, vein varicose and arterial systemic hypertension with a prevalence of 22,7%. Prevalence of 13,6% to 18,2% was found to some characteristics, such as sedentary lifestyle, arterial failure, previous stroke, arrhythmia, immobilization, recent previous surgery and infection. Other risk factors were found in less than 10% of the group.

Figure 1 - Rick factors prevalence in patient diagnosed with VTE



About treatment, group A was treated with low weight molecular heparin only (LMWH) (15%), warfarin only (5%), LMWH plus warfarin (55%), warfarin plus unfractionated heparin (10%), initially LMWH changed afterward to warfarin plus unfractionated heparin (5%). One patient was treated outside HUM-UEM with thromboembolectomy, and one patient had two consecutive hospitalizations, one treated with LMWH only and the second warfarin plus unfractionated heparin. (Table 1)

DISCUSSION

The age average showed by this research in group A (51,6 years old) and the lack of sex preference is compatible with other studies ^{8,9,10,11,12}. Even though some articles didn't find obesity as a risk factor for VTE ^{13,14}, it was the most frequent in Group A, as it was found by Eichinger et al ¹⁵. In all cases the diagnosis was confirmed by Echo Doppler since 50% of patients with VTE signs and symptoms do not have the affection ¹¹, as it was evidenced in group B with 22 (52,4% of all patients searched) patients that got diagnosis different than that, such as bruise, erysipelas, cellulitis and others. One of the possible explanation to recent previous trauma do not associate with VTE in this study is that those traumas were low intensity, without broken bones, immobilization or surgery necessary ¹⁶.

CONCLUSION

It's not possible to determine any epidemiological conclusion over the results as we don't have sufficient number of patients analysed, however this study can work as a basis to further ones. Data analysis in this research let us infer that we have the necessity to make a prospective study about risk factor that comes to this service to take out some bias about the lack of active research and failure in recording the data from medical team. It's important to extend the number of patients in the study to get more statistical significance and develop a protocol to diagnoses and treatment standardized to this service.

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