P1694 THROMBOSIS RISK ASSESSMENT IN LYMPHOMA PATIENTS - PROSPECTIVE PILOT STUDY

Topic: 34. Thrombosis and vascular biology - Biology & Translational Research

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Background: The incidence of thromboembolism (TE) varies throughout the literature, because of several reasons. Firstly, lymphomas are characterized by pronounced heterogeneity, with distinctive features depending on the biology of lymphoma subtype. More importantly, the scarcity of proper disease specific guidelines for TE diagnostics and the lack of wide accepted usage of disease specific risk assessment model(s) (RAMs), combined with underestimation of frequency of TE in lymphoma patients, consequently results in inadequate standard of care for TE in this specific group of patients.

Aims: Therefore, we aimed to assess the predicting power of different RAMs for TE development, coupled with diagnostic algorithms that distinguish the objective need for radiological diagnostic procedures (colour duplex scan (CDS) and computerized tomography pulmonary angiography (CTPA)).

Methods: In a prospective cohort study a total of 36 patients with lymphoma were included. We used proper validated algorithms that define the demand for radiologic procedures. For suspected deep vein thrombosis (DVT) combined algorithm of Wells score and D-dimer was used, and for suspected pulmonary embolism (PE) we used YEARS algorithm. Prior to initiation of specific hematological treatment, all patients included in the study were subjected to the predefined study protocol which outlined the requirement of radiologic studies for TE evaluation. Blood samples were taken for D-dimer measurement (unit mg/L). TE events in lymphoma patients have been diagnosed from the time of initial hospitalization up to 3 months after the last cycle of therapy. Moreover, we used following RAMs for TE risk estimation: ThroLy score, Khorana score and Vienna CATS score. The patients at risk were classified by ThroLy score (>1), by Khorana score (≥2), and Vienna CATS score (expressed as predicted 6 months risk for venous TE (VTE) development).

Results:

The median patients’ age was 62 years (range, 25-76 years); 52.8% were females. The diagnosis of aggressive non-Hodgkin lymphoma (NHL) was predominant (59.5%). The majority of the patients had limited or intermediate stage of disease: Ann Arbor stage I/II 51.4%, stage III/IV 48.6%, respectively. 5 TE events (13.8%) were diagnosed, 4 lower extremity DVT (11.1%) and 1 PE (2.7%). Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of algorithm for DVT assessment based on Wells score and D-dimer level were 60%, 90.3%, 50% and 93.3% whilst for YEARS algorithm were 60%, 64.5%, 21.4% and 90.9%, respectively. Median D-dimer level in lymphoma patients with TE event was 2.19 mg/L (range, 0.54-6.64) comparing to patients without thrombosis 0.7 mg/L (range, 0.17-5.89). Median predicted 6 months risk for VTE development by Vienna CATS score in patients with thrombosis was 6.5% (range, 4.9-9.1) vs. patients without thrombosis 5.1% (range, 4.4-8.8). Sensitivity, specificity, PPV and NPV of ThroLy score were 80%, 38.7%, 17.4% and 92.3%, while for Khorana score were 40%, 83.9%, 28.6% and 89.7%, respectively.

Summary/Conclusion: The use of disease specific RAMs and TE diagnostic approach algorithms should be encouraged considering their acceptable statistic performance in risk assessment of TE complications in lymphoma patients. Further and larger studies, that would potentially incorporate D-dimer level in existing RAMs could possibly result in risk prediction enhancement.