Mental health prognosis of young venous thromboembolism patients. A nationwide cohort study on psychotropic drug purchases

Authors:
A Hojen¹, A Gorst-Rasmussen¹, GYH Lip², DA Lane², LH Rasmussen¹, EE Sorensen³, TB Larsen¹, ¹Aalborg University Hospital, Aalborg Thrombosis Research Unit, Department of Clinical Medicine - Aalborg - Denmark, ²University of Birmingham, Centre for Cardiovascular Sciences, City Hospital - Birmingham - United Kingdom, ³Aalborg University Hospital, Clinical Nursing Research Unit, Aalborg University Hospital Science and Innovation Center - Aalborg - Denmark,

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Background
Chronic medical illness in youth can lead to emotional and behavioural problems and is a risk factor for poor mental health, including psychiatric disorders. Even though venous thromboembolism is a life threatening disease with potentially long-term somatic consequences, the impact on mental health of young venous thromboembolism patients has not been investigated comprehensively.

Purpose
To assess the mental health prognosis of young venous thromboembolism patients using psychotropic drug purchase as a proxy measure.

Methods
A nationwide cohort study was conducted using data from four nationwide registries: (i) The Danish Civil Registration System (ii) The Danish National Patient Register (iii) The Danish National Prescription Registry; (iv) The Danish Medical Birth Registry. From the Danish national patient registry we identified 4,132 patients aged 13-33 with a first-time hospital diagnosis of venous thromboembolism between 1997-2010, and randomly selected a comparison cohort matched individually in a 1:5 ratio based on sex and age. Participants were followed in the nationwide Danish National Prescription Registry for first psychotropic drug purchase. The analyses were stratified on sex, venous thromboembolism type and calendar period, and for each psychotropic drug endpoint: antipsychotics; anxiolytics; sedatives; antidepressives. To ensure that the risk difference was assessed between reasonably comparable venous thromboembolism cases and population controls, we also considered analyses adjusted for the effect of recent pregnancy and recent provocation.

Results
The crude risk of psychotropic drug purchase was substantially higher among young venous thromboembolism cases compared to population controls. Among cases, the 1-year risk of psychotropic drug purchase was 7.1% (95% confidence interval [CI] 6.3 to 7.9) and the 5-year risk 22.1% (95% CI 20.7 to 23.5). This corresponded to 1- and 5-year risk differences relative to the controls of 4.7% (95% CI 3.9 to 5.5), and 10.8% (95% CI 9.4 to 12.3), respectively. Adjustment for the effect of recent pregnancy or recent provocations attenuated risk differences to 4.1% (95% CI 3.5 to 5.1) after 1 year and 9.6% (95% CI 8.3 to 11.2) after 5 years.

Conclusions
A venous thromboembolism diagnosis in youth may be associated with substantial consequences for the patient’s subsequent mental health, as one in five will experience mental health problems requiring psychotropic medication within the first 5 years after diagnosis.