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## Thrombotic risk in patients with primary immune thrombocytopenia is only mildly increased and explained by personal and treatment-related risk factors

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### Abstract

**Background:** An increased risk of thrombosis has been reported in primary immune thrombocytopenia (ITP) and with the use of thrombopoietin (TPO) receptor agonists, on the basis of population studies using administrative databases.

**Objectives:** To evaluate if the incidence of venous and arterial thrombosis in patients with primary ITP is higher than a clinically significant cut-off set at of 3% and 6.4%.

**Patients/methods:** We undertook a retrospective multicenter investigation in a large cohort of patients requiring at least one treatment for ITP, enrolled from the major tertiary Italian centers treating ITP. A total of 986 patients were analyzed.

**Results:** During a 3888 patient-year follow-up, 43 first thrombotic events occurred: 28 arterial and 15 venous, resulting in a cumulative incidence of 3.2% for arterial (95% CI, 2.0-5.0) and 1.4% (95% CI, 0.8-2.5) for venous thrombosis at 5 years. The annualized rates for 100 patient-years were 1.14 (95% CI, 0.84-1.54), 0.39 (95% CI, 0.23-0.65) and 0.71 (95% CI, 0.49-1.04) for total, venous and arterial thrombosis. Splenectomy, performed in 136 patients (13.7%), increased thrombotic risk (HR = 3.5, 95% CI) compared with non-splenectomized patients. Age > 60 years, more than two risk factors for thrombosis at diagnosis and steroid use were independently associated with an increased risk of thrombosis.

**Conclusions:** In this study, we demonstrate that the 5-year cumulative incidence of venous and arterial thrombosis in ITP is well below the predefined thresholds. Venous and arterial thromboembolism are not frequent complications in ITP, except in particular settings, such as in splenectomized and elderly patients.