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ITP and thrombosis: an intriguing association

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Abstract

In the last decade, after the initial reports of thrombotic events in patients exposed to the thrombopoietin-receptor agonists (TPO-RA) romiplostim and eltrombopag, large epidemiological investigations have been conducted to establish if increased thrombotic risk could be a hitherto unknown feature of immune thrombocytopenia (ITP) itself. A slightly higher risk of venous thrombosis (maximum of twice the control population) was consistently found in ITP patients who were not treated with TPO-RA. No significant increase of arterial thrombosis risk was apparent. However, age, splenectomy, and personal risk factors may put some ITP patients at a particularly higher risk of venous and arterial thrombosis (up to 3-4 times higher than the average control subject). For patients exposed to TPO-RA, there is indirect evidence of a much higher risk of both arterial and venous thrombosis (up to 3-4 times than that reported in nonexposed patients). Unfortunately, in the substantial absence of a matched control population in these studies, any comparison is potentially biased. It cannot be ruled out that the strict monitoring required by the regulatory agencies in these registration studies and their prospective nature may have overestimated the incidence of thrombosis, which was recorded as an adverse event, in comparison with epidemiological studies. The mechanisms of increased risk of venous thrombosis in ITP and of arterial and venous thrombosis associated with the use of TPO-RA remain unsettled. In choosing a particular therapeutic approach, the clinician should individualize the best treatment for the patient while considering the thrombotic risk and should actively treat only those patients who are really at risk of bleeding.