

## Correspondence

### Venous thromboembolism after high-dose chemotherapy in a patient with Hodgkin's lymphoma receiving the new oral contraceptive ethinylestradiol and drospirenone ('Yasmine')

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We report a case of venous thromboembolism in a 29-year-old woman who underwent high-dose chemotherapy ('BEAM' regimen) followed by peripheral blood progenitor cells (PBPCs) for Hodgkin's lymphoma in early relapse after first-line chemotherapy. At 15 days after the PBPCs reinfusion, the patient developed an extensive right ilio-femoral thrombosis documented with magnetic resonance imaging (Angio-MR). Laboratory data were: platelet 48 000/mm<sup>3</sup>, white blood cells 7600/mm<sup>3</sup>, red blood cells 2 570 000/mm<sup>3</sup>, hemoglobin 8.8 g/dl, prothrombin time 11.5 s, partial thromboplastin time 42.6 s, and international normalised ratio (INR) 0.97. The patient was successfully treated with heparin given intravenously by continuous infusion followed by oral therapy with warfarin. Venous thromboembolism is multifactorial and often results from a combination of risk factors.<sup>1</sup> In our patient, common risk factors for venous thrombosis such as history of venous thromboembolism, cigarette smoking, obesity, or hypercoagulable state were absent. However, the patient had received a new low-dose oral contraceptive ethinylestradiol and drospirenone for 3 months. This new contraceptive marketed under the trade name 'Yasmine' has been available in several European countries since 2000. Recently, the Dutch pharmaco-vigilance center reported five cases of thromboembolism as a suspected adverse drug reaction to this contraceptive.<sup>2,3</sup> Thromboembolism is a well-known complication of oral contraceptives; lawrenson *et al*<sup>4</sup> reported a crude incidence of venous thromboembolism of 38 per 100 000 women who used combined oral contraceptives. Estrogens are considered to be responsible for the development of a hypercoagulable state that

increases the risk for thromboembolic events. Moreover, the thromboembolic risk of patients carrying a molecular variant of factor V Leiden is increased 30-fold with the use of oral contraceptives, while for homozygous individuals the risk is >100-fold.<sup>5</sup>

In conclusion, our experience suggests that the new contraceptive pill 'Yasmine' may be associated with an increased risk of venous thromboembolism; in particular, in our case, the episode of venous thromboembolism occurred also in the presence of post transplant thrombocytopenia. Finally, in view of the high thromboembolic risk related to cancer and the simultaneous use of oral contraceptives, we suggest that other methods of contraception should be considered in female cancer patients.

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## References

- 1 Rosendaal FR. Venous thrombosis: a multicausal disease. *Lancet* 1999; **353**: 1167–1173.
- 2 Sheldon T. Dutch GPs warned against new contraceptive pill. *BMJ* 2002; **324**: 869.
- 3 Van Grootheest K, Vrieling T. Thromboembolism associated with the new contraceptive Yasmine. *BMJ* 2003; **326**: 257.
- 4 Lawrenson RA, Whalley A, Simpson E *et al*. DoH seems to have underestimated incidence of venous thromboembolism in users of combined oral contraceptives. *BMJ* 1999; **319**: 387.
- 5 Gris J, Jamin C, Benifla JL *et al*. APC resistance and third-generation oral contraceptives. *Hum Reprod* 2001; **16**: 3–8.