

## Metabolic syndrome and venous thrombosis: potential role of microparticles

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To the Editor,

We thank the authors (Anders E. and Goichot B.) for their interest in our study, in which we have described an increased risk of venous thromboembolism (VTE) in the presence of the metabolic syndrome.<sup>1</sup> The metabolic syndrome comprises abdominal obesity (elevated waist circumference), elevated blood pressure, high triglycerides, reduced levels of high-density lipoprotein cholesterol and elevated fasting glucose plasma levels and is a well known risk factor for type 2 diabetes and atherosclerotic cardiovascular disease and cerebrovascular disease.<sup>2</sup> Obesity defined by a body mass index (BMI) above 30 kg/m<sup>2</sup> is not reflected in the definition of the metabolic syndrome. Indeed, we have observed in our study that the presence of the metabolic syndrome was significantly associated with the BMI and obesity.<sup>1</sup>

In their comment concerning our paper on VTE as a manifestation of the metabolic syndrome the authors note that we missed to discuss the potential role of circulating procoagulant microparticles in the pathophysiology of venous thrombosis. Unfortunately we were unable to measure circulating microparticles for this study. Goichot and co-workers have reported markedly increased circulating microparticles in obese women compared to normal weight control subjects in a preliminary study and concluded that the increase of circulating microparticles in obese subjects may reflect cell activation and could account for the increased risk of thrombotic complications in obesity.<sup>3</sup> To the best of our knowledge up to now there is no study available reporting on an association of circulating microparticles and the risk for VTE and giving us sufficient evidence for the poten-

tial role of MP in the clinical manifestation of VTE. In the discussion of our publication we addressed those markers and parameters with a potential role in the pathophysiology of the metabolic syndrome as a risk factor for VTE that are already mentioned in the literature. As data on microparticles and VTE are actually missing we did not speculate on this issue.

We again are thankful to the authors for their interesting comment about the potential role of microparticles in the pathophysiology of venous thrombosis in the presence of the metabolic syndrome and propose to measure procoagulant circulating microparticles in future studies to investigate their relationship with VTE and with the metabolic syndrome.

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## References

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