Pregnancy-associated venous thromboembolism: Insights from GARFIELD-VTE

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BACKGROUND
• The risk of venous thromboembolism (VTE) is increased in pregnancy and postpartum, such that VTE is a leading cause of maternal mortality1.
• The Global Anticoagulant Registry in the FIELD (GARFIELD)-VTE is an on-going non-interventional, prospective, observational study of VTE management and outcomes2.

PURPOSE
• Compare the baseline characteristics, diagnostic strategies, treatment patterns and 1 year clinical outcomes between women of childbearing age [<45 years] with or without pregnancy-associated VTE (PA-VTE) enrolled in GARFIELD-VTE.

METHODS
• Eligible patients were required to be ≥18 years of age, with a confirmed diagnosis of acute VTE within 30 days of entry into the study, and being actively managed for VTE.
• All patients provided written informed consent. The study was approved by the individual ethics committees of each participating site.
• Women with PA-VTE were defined as those diagnosed with VTE during pregnancy or within 6-weeks postpartum.

RESULTS
Study design
• Between May 2014 and January 2017, 11,842 patients were assessed for entry into GARFIELD-VTE. 10,868 patients from 415 sites in 28 countries were successfully enrolled, 1,130 of whom were eligible for analysis (Figure 1).

Table 1. Patient demographics

|                         | PA-VTE (n=1,130) | NPA-VTE (n=1,187) | p
|-------------------------|-----------------|------------------|---
| Age, years, mean (SD)   | 33.7 (6.1)      | 34.1 (5.3)       | 0.17
| BMI, kg/m², mean (SD)   | 23.7 (3.9)      | 23.8 (3.4)       | 0.005
| Current/past smokers (%)| 40.2 (3.4)      | 43.9 (4.2)       | 0.006
| Missing                 | 5               | 7                | 0.27
| Site of VTE, n (%)      |                  |                  | 0.07
| DVT alone               | 147 (13.2)      | 160 (8.7)        | 0.01
| PE alone                | 95 (8.3)        | 129 (6.8)        | 0.04
| DVT+PE                  | 58 (5.1)        | 23 (1.2)         | 0.001
| Age                    | 32 (2.7)        | 32 (2.8)         | 0.63
| Missing                 | 4               | 8                | 0.26
| Obesity (BMI ≥ 30), n (%)| 31 (2.5)        | 36 (2.1)         | 0.07
| ASA                     | 67 (5.9)        | 76 (5.8)         | 0.34
| CABG                    | 7 (0.6)         | 10 (0.5)         | 0.55
| Miniprostheses          | 10 (0.9)        | 11 (0.6)         | 0.48
| Missing                 | 2               | 3                | 0.40
| Completed VTE (n, %)    |                  |                  | 0.07
| CABG                    | 2 (0.2)         | 1 (0.1)          | 0.63
| VTE                     | 110 (9.9)       | 114 (6.1)        | 0.006
| Missing                 | 2               | 5                | 0.29
| Other interventions     |                  |                  | 0.006
| Anticoagulation         | 1017 (93.3)     | 1097 (59.9)      | 0.0001
| CABG                    | 65 (5.7)        | 71 (3.7)         | 0.03
| VTE                     | 1 (0.1)         | 3 (0.2)          | 0.40

Diagnostic strategies
• Compression ultrasonography was frequently used to diagnose DVT in PA-VTE patients, whilst spiral/ chest computed tomography scan was frequently used to diagnose PE (Figure 2).

Figure 2. Diagnostic strategies for A deep vein thrombosis (B) and pulmonary embolism


Anticoagulation treatment
• At baseline, 43.2% of PA-VTE patients received parenteral therapy alone, and 50.4% received a VKA or a DOAC (Figure 3).

Figure 3. Anticoagulation treatment


1 year clinical outcomes
• After adjustment for baseline characteristics, the risk of all-cause mortality, recurrent VTE and major bleeding were comparable between patients with and without PA-VTE (Figure 4).

Figure 4. Adjusted hazard ratios for 1 year follow-up

CONCLUSION
• Half of all patients with PA-VTE received either a VKA or a DOAC, despite limited evidence for their use in this population.
• The rate of clinical outcomes was comparable between patients with and without PA-VTE.

ACKNOWLEDGEMENTS
We thank the physicians, nurses and patients involved in GARFIELD-VTE. Editorial assistance was provided by Nick Buddworth (Thrombosis Research Institute, London, UK). REFERENCES

3DECLARATION OF CONFLICT OF INTEREST

No disclosures of any kind are declared from any of the authors.