

Can 4F-PCC be used as a substitute for FP in the treatment of bleeding related to coagulation factor deficiency in cardiac surgery?

Cardiac surgery imposes multiple stressors on the coagulation system, resulting in systemic derangements that include depletion of coagulation factors to a degree that impairs thrombin generation and can lead to excessive bleeding and transfusions. Replenishment of coagulation factors is an important aspect of a multimodal approach to perioperative coagulopathy

FARES trial A comparison of 4F-PCC with FP for the management of haemorrhage in cardiac surgery



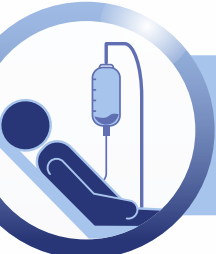
Population

- **101** adults undergoing cardiopulmonary bypass
- Median age, **67 years**
- Male, **72%**

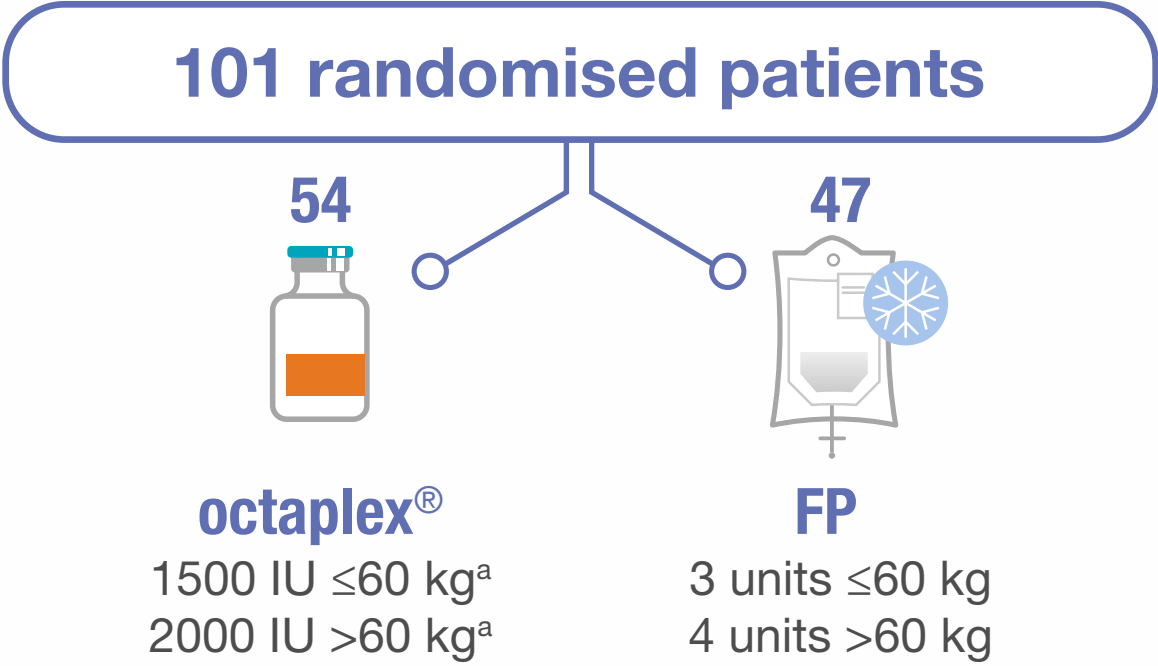


Location

- Two hospitals in Canada



Intervention



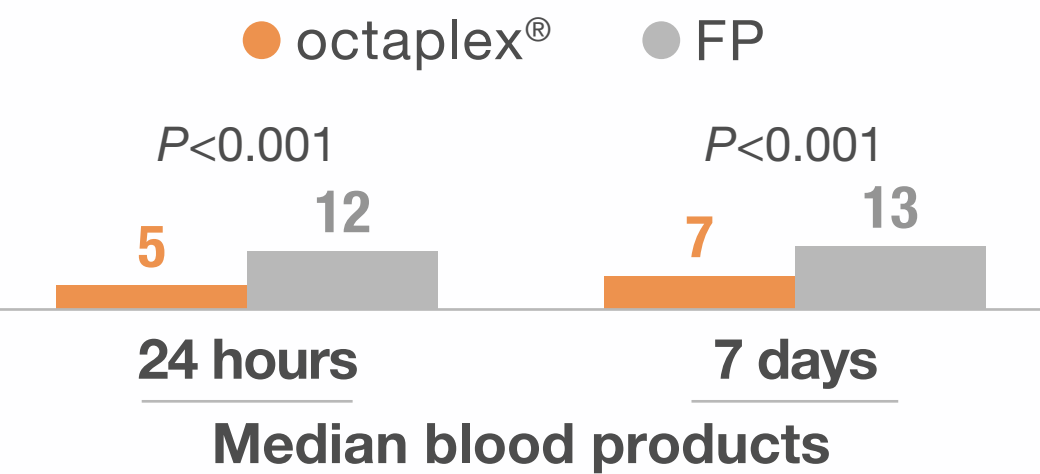
Primary endpoint

- To assess feasibility of study procedures and also suitability of 4F-PCC as a substitute for FP by recording patients in the 4F-PCC group who ultimately required FP

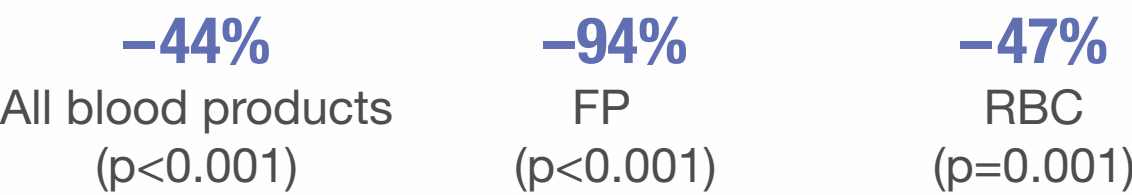


Results

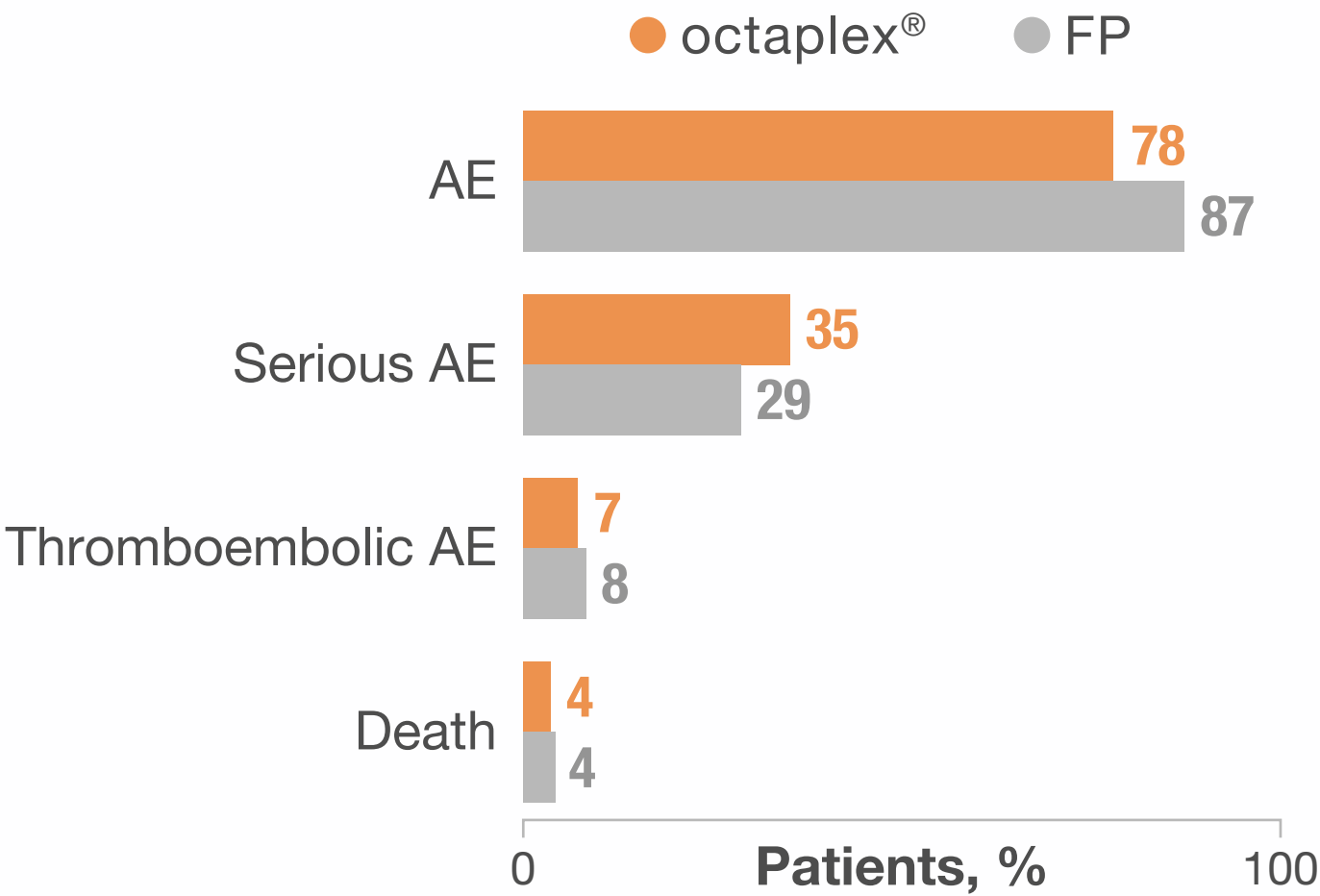
- Lower blood product use with 4F-PCC



- Lower mean ratio of cumulative blood product use with 4F-PCC within 24 hours post-surgery



- Treatment-emergent and thromboembolic AEs were similar between groups



Conclusion

In bleeding patients requiring coagulation factor replacement during cardiac surgery, 4F-PCC may be a suitable substitute for FP as it markedly reduces the need for FP and may have haemostatic superiority without increasing the occurrence of AEs.

^aRepeated once if necessary; then, all patients received FP if needed.
4F-PCC, four-factor prothrombin complex concentrate; AE, adverse event; FP, fresh frozen plasma; RBC, red blood cell.
Karkouti K, et al. *JAMA*. 2021 [in press].