19. POINT OF CARE TESTING

Point of care (POC) testing devices provide rapid bedside monitoring to aid the clinician in directing appropriate targeted therapy.1

Key Messages

The use of transfusion algorithms in conjunction with POC testing has been shown to reduce both transfusion requirements and blood loss in cardiac surgery.1

Clinical Implications

In adults undergoing cardiac surgery, the use of thromboelastography (TEG) should be considered

(PO- R16).2

Background

Patients undergoing cardiac surgery are vulnerable to platelet defects which can be either pre- existing defects, drug induced and from the anti-platelet effects from cardiopulmonary bypass (CPB).1 It is therefore important monitor platelet function during cardiac surgery.1

Currently there is limited evidence for the effect of POC testing other than TEG. However thromboelastometry (ROTEM) is becoming more widely used and is considered equivalent by international guidelines.3 TEG analysis reflects haemostasis in vivo, including clot development, stabilisation and dissolution. A meta-analysis found that the use of a TEG-based transfusion algorithm resulted in a significant reduction in the incidence of transfusion with fresh frozen plasma (FFP) and platelets, and may have reduced the incidence of RBC transfusion, compared with the use of a transfusion protocol that was not TEG based.

References

1. Enriquez LJ, Shore-Lesserson L. Point -of-care coagulation testing and transfusion algorithms. BJA 2009;103:i4-i22.

2. National Blood Authority. Patient Blood Management Guidelines: Module 2 - Perioperative. Australia 2012.

3. Kozek-Langenecker SA, Afshari A, Albaladejo P, Santullano CA, De Robertis E, et al. Management of severe

perioperative bleeding: guidelines from the European Society of Anaesthesiology. Eur J Anaesthesiol. 2013;30:270-

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Additional Resources

y Case study Point of Care Coagulation Testing National Blood Authority <http://blood.gov.au/point-care-coagulation->testing-case-study-prince-charles-hospital-brisbane

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