

TEG and TEG with Platelet Mapping Results Interpretation

**THIS DOCUMENT IS PROVIDED AS AN INFORMATIONAL GUIDELINE ONLY.
TREATMENT DECISIONS SHOULD BE CLINICALLY DETERMINED BY A PHYSICIAN**

PREOP: Timing of Cardiac Surgery based on TEG/PM results	
TEG MA (ADP)	
> 50mm	Within 1 day
35-50mm	Wait 3-5 days
<35mm	Wait 5 days

Treatment Guide ^{*#}			
TEG [®] Value	Hemostasis State	Common Treatment	Notes
R less than 4 min	Enzymatic hypercoagulability	Anticoagulant of choice	<p># Hypothermia: If patient post op is hypothermic, suggest placing one sample of patient’s blood in TEG[®] cup at patient’s body temperature, and second sample in TEG[®] cup set at a temperature of 37°C. The difference in patient hemostasis would be attributed to effects of hypothermia. If hypothermic patient is bleeding but hemostasis in 37°C sample is normal, this is indicator that as patient warms up, bleeding may stop. On other hand, if 37°C sample shows coagulopathy and patient is bleeding, then coagulopathy can be treated until 37°C sample is normalized, and then if hypothermic patient continues to bleed, this can be attributed to the hypothermia.</p> <p>##DDAVP: MA values between 46-54 reflect slight dysfunction. You can treat with DDAVP to enhance platelet effectiveness by increasing plasma levels of high multimeric von Willebrand’s factor, factor VIII, and by other undefined mechanisms, or with one unit of platelets. Conversely, consider delaying or bypassing treatment to allow time for patient’s own platelets to recover.</p> <p>If normal TEG[®] test results obtained and patient is bleeding: Rule out von Willebrand’s disease/acquired von Willebrand’s factor (vWF) deficiency. The clot is fully functional, but cannot adhere to damaged vascular site due to poor platelet-to-subendothelial bonding. Consider treating with DDAVP (to release vWF) or FFP/cryo (contains vWF). Rule out antiplatelet drugs using PlateletMapping[™], which measures the effect of antiplatelet therapy. Mechanical bleeding: If vWF deficiency and antiplatelet drugs have been ruled out, consider surgical bleeding.</p> <p>Rewarming and MA: The MA value of blood sample run at rewarming is typically lower by 5 to 7 mm, compared to the one post-protamine. If patient not heparin treated, evaluate coagulopathy based on the plain sample, since it is recommended to run samples simulating in vivo conditions. Therefore, in the absence of heparin, assessment without heparinase is advised.</p>
R between 11 – 14 min	Low clotting factors	x2 FFP or 8 mL/kg ^{7, 8, 26}	
R greater than 14 min	Very low clotting factors	x4 FFP or 15 mL/kg ^{1, 5, 26}	
MA between 46-54mm	Low platelet function	0.3 mcg/kg DDAVP ^{27,11##}	
MA between 41-45mm	Very low platelet function	X 1 platelet pheresis ^{8, 26}	
MA at 40mm or less	Extremely low platelet function	X 2 platelet pheresis ^{10, 26, 8, 1}	
MA greater than 73mm	Platelet hypercoagulability	Antiplatelet therapy	
R less than 4 min and MA greater than 73mm	Enzymatic and platelet hypercoagulability	Antiplatelet therapy and anticoagulant of choice ^{1, 11, 10, 28}	
Angle less than 45 degrees	Low fibrinogen level	0.06 units/kg cryo ⁵	
Interim LY30 values may be reported but are not currently actionable			

*Note: References for TEG[®] Treatment Guide can be found at www.haemoscope.com/reference