

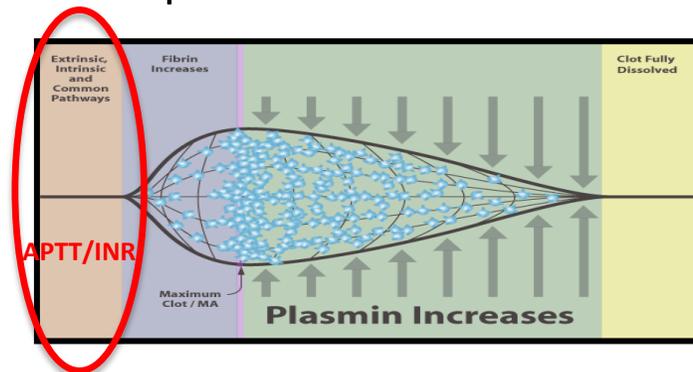
Unusual case of an isolated prolonged APTT

Lee N, Ho P, Lim HY

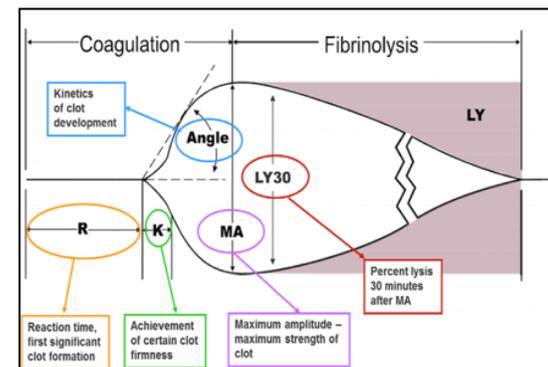
¹Department of Haematology ²Northern Pathology Victoria

Background

- Coagulation abnormalities can present as a diagnostic challenge during pre-operative workup
 - Isolated prolonged APTT can be due to factor deficiency or inhibitors such as lupus anticoagulant
 - Factor deficiency – potential bleeding risk
 - Inhibitors such as lupus anticoagulant – potential thrombotic risk
- Traditional coagulation studies only provide information for time to clot formation and is not representative of the individual's haemostatic profile
 - Global coagulation assays such as thromboelastography and thrombin generation may provide better representation of the bleeding and/or thrombotic risk



VS



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Case Report

- 71 yo man requiring Category 1 lap proctocolectomy in the setting of severe Crohns disease
- No significant bleeding diathesis
- Pre-op workup:
 - PT 13.9 sec (RR 11-16s)
 - APTT 51.9s (RR 25-28s)
 - Mixing studies: full correction
 - Indicates factor deficiency
 - Intrinsic factor studies
 - Normal factors VIII, IX, XI and XII
 - Normal pre-kallikrein level
 - Lupus anticoagulant: negative

- Global coagulation assay:

Global coagulation assay	Parameter	Reference range	Patient values
	Thromboelastography		
	R-time (min)	2 – 8	3.8
	K-time (min)	1 – 3	1.7
	Alpha-angle (°)	55 – 78	66.1
	Maximum amplitude (mm)	51 – 69	73.2
	Lysis 30 (%)	0 – 8	0.1
	ST-Genesia Thromboscreen without thrombomodulin		
	Lag time (min) (normalised ratio)	(1.2 – 1.3)*	2.8 (1.59)
	Peak (nM) (normalised %)	(45 – 69)*	309.8 (95.2)
	Endogenous thrombin potential (nM.min) (normalised %)	(59 – 78)*	1653 (108.7)
	Velocity index (nM/min) (normalised %)	(37 – 62)*	186 (81.1)

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Discussion & Conclusion

- Global coagulation assay is more representative of an individual's haemostatic profile
 - Provides further reassurance to proceed with major surgery
 - Avoid unnecessary blood transfusion
 - Note: in this case the patient had more hypercoagulable TEG and thrombin generation in addition to baseline increased prothrombotic risk in the setting of Crohn's – hence unnecessary coagulation factor replacement would have further increased the risk of thrombosis.
- May be the future of how we assess a patient's ability to bleed or clot