ABSTRACT:
DURING CATHETER DIRECTED THROMBOLYSIS PARAMETERS OBTAINED FROM THE FUNCTIONAL FIBRINOGEN ASSAY OF THROMBOELASTOGRAPHY WERE COMPARED WITH THE BLOOD FIBRINOGEN LEVELS AND WITH THE BLEEDING EPISODES. STRONG CORRELATION WAS FOUND WITH THE POSSIBLE ADDITIONAL ADVANTAGE OF REDUCING THE BLEEDING RISK IN THESE PATIENTS.

CATHETER DIRECTED THROMBOLYSIS (CDT)
Bleeding - the dreaded complication
Fibrinogen - widely used to monitor CDT
r-tPA (recombinant tissue plasminogen activator) infusion - fibrinogen can be artificially high or normal due to accumulation of fragment X [1]

OTHER OPTIONS?
Viscoelastic Tests: global assessment of hemostasis
Thromboelastography and Thromboelastometry
Key Thromboelastography (TEG) parameters
R – time (first evidence of clot)
Alpha – angle (rate of clot formation)
MA – Maximum amplitude (clot strength)
LY30 – Percentage lysis at 30 minutes (measure of degree of fibrinolysis)
MAFF – MA of Functional Fibrinogen Assay

RESULTS
MAFF ↓ with serum fibrinogen
Correlation Coefficient:
Pre - 0.78, 12 hours - 0.87, 24 hours - 0.94
One patient (P) - gross hematuria: CDT terminated
LY30:2P, Mild Hematuria, 3P - Access Site Bleeding

OBJECTIVE
To assess the utility of TEG while monitoring and managing patients undergoing CDT, by comparing it with blood fibrinogen levels

STUDY:
➢ Location: Medanta – The Medicity Hospital
➢ Duration: May 2015 to September 2016
➢ Number of patients: 46
➢ Patient population: Acute Lower Limb DVT
➢ Location: Iliac Veins +/- Inferior Vena Cava
➢ Thrombolytic used: r-tPA
➢ Test: TEG performed along with serum fibrinogen
➢ Frequency: Once Pre and 12 hours during CDT
➢ Assessment: Pre and two post-procedure values
➢ Comparison: Serum fibrinogen with Maximum Amplitude of functional fibrinogen assay (MAFF)
➢ Statistical method: Pearson’s Correlation
➢ Bleeding episodes assessed with LY30

CONCLUSION
Viscoelastic tests like TEG definitely have a role in managing patients undergoing CDT. It is a point of care testing modality that provides parameters that strongly correlate with serum fibrinogen. Based on the current limited data LY30 value may help as a valuable marker to prevent bleeding. Additionally viscoelastic tests could help in providing a goal directed therapy in the eventuality of a hemorrhagic complication.

REFERENCES