Comparison between coagulation standard laboratory tests and Rotational Thromboelastometry baseline results in orthotopic liver transplantation: a cross sectional study.

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Background and Goal of Study

End stage liver disease (ESLD) patients are characterized by a rebalanced haemostatic system. This represents a paradigm shift, abandoning the concept of “auto-anticoagulation” based on alterations of standard laboratory test (SLT). Viscoelastic tests emerge as a more suitable alternative. The aim of this study was to evaluate the correlation between SLT and ROTEM results at the beginning of orthotopic liver transplantation (OLT).

Materials and Methods

We reviewed the electronic medical records of 69 patients between January 2016 and August 2017.

1. SLT (Clauss Fibrinogen, PT, aPTT, TT, Platelet count) and ROTEM baseline results were collected.
2. The correlations between aPTT/INTEM CT; PT/EXTEM CT; TT/INTEM CT-EXTEM CT; Clauss Fibrinogen/FIBTEM A10; Platelet count/PLTEM A10 were evaluated using the Spearman’s correlation coefficient and ROC curves.

Results and Discussion

rho	0.83
p	< 0.0001
PPV	0.63
NPV	0.97

rho	0.77
p	< 0.0001
PPV	0.92
NPV	0.92

Of those patients with a platelet count below 50.000/mcL, 30% had normal ROTEM amplitude parameters (A10 EXTEM > 35 mm). Which indicates that not all thrombocytopenic patient had a reduced cloth strength.

Conclusions

- ✓ FIBTEM and PLTEM A10 values may be used to diagnose hypofibrinogenemia and thrombocytopenia at the beginning of OLT.
- ✓ We do not recommend using aPTT and INTEM CT interchangeably for making transfusion decisions.
- ✓ We also do not recommend PT and TT as assessment tools for this patient population.