Abstract: P763

Home Monitoring is associated with fewer gastrointestinal bleeding events following ventricular assist device implantation

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Introduction: Patients (pts) treated with a continuous flow left ventricular assist device (LVAD) are at increased risk for both bleeding and thromboembolic events. Maintenance of oral anticoagulation (AC) in the therapeutic range is difficult to achieve.

Hypothesis: Increased frequency of international normalized ratio (INR) home monitoring (HM) decreases the incidence of gastrointestinal bleeding and thromboembolic events (stroke, pump thrombosis) compared to standard of care (SOC).

Methods: We analyzed the efficacy of outpatient AC monitoring in consecutive pts who underwent VAD implantation at our institution between 2008-2018. Time in therapeutic range (TTR) was defined as percent of time with INR 2.5-2.8. HM pts had biweekly INR measurements using the Coagucheck XS ROCHE, while SOC pts had INR measured every 1-3 weeks. Gastrointestinal bleeding (GIB) and thromboembolic events were assessed by retrospective blinded chart review. Logistic regression was used to model the impact of TTR on the risk of GIB and THROMB.

Results: There were 85 pts: 44 in HM and 40 in SC arm with similar characteristics. SOC patients were more likely to have ischemic cardiomyopathy (63% vs 30%, p=0.006) and an LVAD (60% vs 25%, p=0.002). The use of HM was associated with a 19.7% reduction in the risk of GIB (8.8% vs 28.5%, p=0.043) and a trend towards lower risk of THROMB (6.8% vs 14.9%, p=0.19). HM pts had significantly longer TTR (52±20% vs 39±22%, p=0.007). Each percentage increase in TTR was associated with a 5.2% decrease in the risk of GIB [Odds Ratio (OR) 0.95, 95% Confidence Interval (CI) 0.91-0.99, p=0.009] even after adjustment for aspirin use and monitoring duration (OR 0.95, 95% CI 0.91-0.99, p=0.020). There was a similar decrease in the risk of overall bleeding (OR 0.94, 95% CI 0.90-0.98, p=0.008).

Conclusions: Increased frequency of home INR monitoring achieved a higher TTR and was associated with a 20% reduction in risk of gastrointestinal bleeding.