

# AMERICAN HEART CONGRESS - CVD

October 05-06, 2018 | Los Angeles, USA

## Analyzing the efficacy and cost-effectiveness of antiplatelet therapy in unstable angina and non-ST elevation myocardial infarction: A decision analysis

**Srikar Reddy**

University of Central Florida College of Medicine, USA

Acute coronary syndrome costs the United States more than \$150 billion annually and burdens individuals both financially and health wise. For these reasons, efficient treatment protocols are paramount. Current pretreatment guidelines for coronary angiography in unstable angina (UA) and non-ST elevation myocardial infarction (NSTEMI) involve the use of dual antiplatelet therapy (DAPT: aspirin + ADP P2Y12 inhibitor), whereas the use of triple antiplatelet therapy (TAPT: aspirin + ADP P2Y12 inhibitor + GpIIb/IIIa inhibitor) is controversial due to increased bleeding risk. However, a direct study comparing the efficacy and cost-effectiveness of DAPT vs. TAPT has not yet been done. A decision analysis was constructed to determine the ideal pretreatment antiplatelet regimen option for UA/NSTEMI patients. The parameters used for this model were values calculated based on published randomized clinical trials. These values consisted of probabilities based on pretreatment strategy (DAPT or TAPT), certain interventions (PCI, CABG, nonprocedural medical management), and 30-day post-treatment outcomes (no event, bleeding, vascular event, death). A Monte Carlo simulation consisting of 10,000 runs provided two outputs: an estimated life-years extended and costs for each treatment modality. The model also took into consideration quality-adjusted life years (QALYs) using calculated coefficients from the literature. The cost/QALY determined to be \$2198/QALY for DAPT vs. \$4316/QALY for TAPT, strongly favoring the use of DAPT as the ideal pretreatment management strategy for UA/NSTEMI patients (1.96 times as cost-effective as TAPT). These results will aid cardiologists in providing the most clinically sound and fiscally responsible care for UA/NSTEMI patients.

srikarreddy@knights.ucf.edu