Antiplatelet therapy changes for myocardial infarction patients with recurrent ischemic events: Insights into contemporary practice from the TRANSLATE-ACS study

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Background

- P2Y12 inhibitor therapy is recommended for 1 year after myocardial infarction (MI), yet little guidance is provided on antithrombotic management for patients with recurrent ischemic events during that year.
- Recurrent events on clopidogrel therapy (clinical clopidogrel failure) may affect physician decision-making, but practices have not been described.

Objectives

- To describe changes in antithrombotic selection after recurrent ischemic events among post-MI patients.
- To identify clinical and demographic factors associated with antithrombotic intensification among patients taking clopidogrel at the time of a recurrent event.

Methods

- The Treatment with Adenosine Diphosphate Receptor Inhibitors: Longitudinal Assessment of Treatment Patterns and Events After Acute Coronary Syndrome (TRANSLATE-ACS) study was a multi-center observational study that examined longitudinal antithrombotic use and outcomes among 12,365 MI patients treated with percutaneous coronary intervention (PCI).
- This analysis focused on patients who had a recurrent MI, unplanned revascularization or both during the 12 months follow-up after the index MI event.
- Primary outcome was P2Y12 inhibitor intensification in response to MI or revascularization, defined as switch from clopidogrel to a higher potency P2Y12 inhibitor (prasugrel or ticagrelor).
- We used multivariable logistic regression model to identify factors associated with P2Y12 inhibitor intensification.

Results


Table. Selected patient characteristics by intensification status

<table>
<thead>
<tr>
<th>Intensification</th>
<th>No Intensification</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics/Medical History</td>
<td>(n = 101)</td>
<td>(n = 991)</td>
</tr>
</tbody>
</table>

- Age
- Male
- Private insurance
- Financial hardship of paying for medications
- Prior CABG
- Prior MI
- Prior stroke or TIA
- Afirial fibrillation
- PAD
- Diabetes


Disclosures

- TRANSLATE-ACS completed enrollment in 2012, and current practice patterns may be different with increasing uptake of ticagrelor and reduced use of clopidogrel.
- Due to the limited number of patients with antithrombotic intensification, we limited the number of candidate variables we could test in our multivariable model; variables were chosen based on clinical reasoning.

Conclusions

- Among patients with recurrent revascularization or MI while still taking clopidogrel within 1 year after a first MI, intensification of P2Y12 inhibitor therapy to a second generation P2Y12 inhibitor is rare, occurring in less than 10% of all patients, less than 15% of patients with MI, and less than 40% of patients with stent thrombosis.
- When physicians do opt to intensify antithrombotic therapy in response to a recurrent vascular event, MI, stent thrombosis, younger age, and shorter duration from index event are strongly associated with intensification; hardship of paying for medications is not associated with intensification.
- As subsequent outcomes were not evaluated, it is unclear whether intensification to a higher potency P2Y12 inhibitor reduces further cardiovascular events in this high-risk population.

References

- Circulation. 2016;133(10):919-926. doi:10.1161/CIRCULATIONAHA.115.021732
- J Am Coll Cardiol. 2015;66(19):2150-2158. doi:10.1016/j.jacc.2015.05.024