



CHANGE DAPT

Clopidogrel or ticagrelor in acute coronary syndrome patients treated with newer-generation drug-eluting stents

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CHANGE DAPT is an investigator-initiated observational study, performed without external funding.

Declaration of Interest

- **Funding**

This investigator-initiated study was performed by the Research Department of Thoraxcentrum Twente without external funding.

- **Conflicts of Interest**

- The research department has received research grants provided by AstraZeneca, Biotronik, Boston Scientific, and Medtronic; data acquisition was partially supported by an unrestricted institutional research grant provided by AstraZeneca.
- My speakers honoraria are requested to be directly donated to the humanitarian non-governmental organization “Médecins Sans Frontières (MSF)/ Doctors Without Borders”.



Background

- Based on current guidelines, patients with acute coronary syndrome (ACS) are mostly treated with dual antiplatelet therapy (DAPT) that uses a highly potent platelet inhibitor (e.g. ticagrelor, rather than clopidogrel) plus Aspirin.
- Guidelines are based on the randomized PLATO trial¹, in which ticagrelor decreased ischemic events in moderate to high-risk ACS patients with a trade-off of more bleedings.
- PLATO pts. were treated with (65%) or without (35%) percutaneous coronary intervention (PCI); and patients treated with PCI received older-generation stents: bare metal or first-generation drug-eluting stents (DES).
- Nowadays, approximately a decade after the pts. were treated in the PLATO trial, newer-generation DES are generally used, resulting in improved outcomes.
- Benefits of ticagrelor in ACS patients treated by PCI with newer-generation DES have not yet been demonstrated.

1. PLATO trial, NEJM 2009



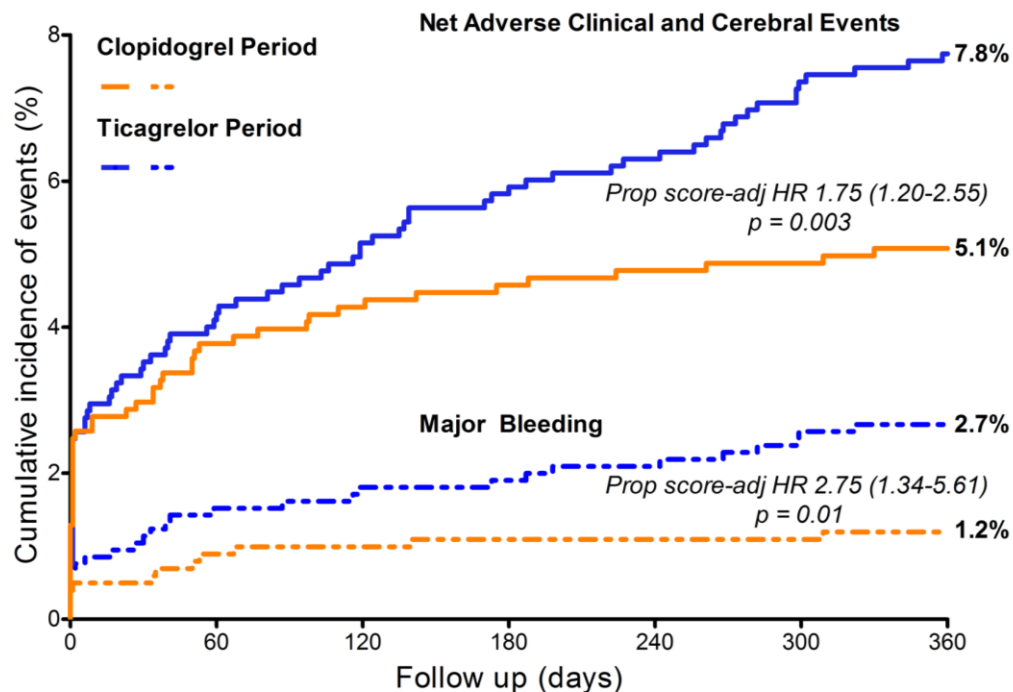
Purpose and Methods

- We assessed the impact on clinical outcome, of the guideline recommended change in primary DAPT regimen (from clopidogrel-based to ticagrelor-based DAPT) in ACS patients, who were all treated by PCI with exclusive use of newer-generation DES.
- The primary DAPT regimen was changed on May 1, 2014.
- CHANGE DAPT is an investigator-initiated, prospective, observational study (NCT03197298) that compared 1-year clinical outcome of PCI for ACS during 2 treatment periods:
 - Clopidogrel period (CP): December 21, 2012 to April 30, 2014
 - Ticagrelor period (TP): May 1, 2014 to August 25, 2015
- Primary endpoint = Net Adverse Clinical and Cerebral Events (NACCE)
 - Composite of all-cause death, any myocardial infarction, stroke, or major bleeding
 - Non-inferiority hypothesis



Results

- **Consecutive ACS patients: 2,062**
- **1-year follow-up rate: 99.3%**
- **The change to ticagrelor-based DAPT was associated with an *increased net event risk*; non-inferiority assessment was classified “inconclusive”.**
- **The difference in event risk was primarily driven by a *higher rate of major bleeding*. No benefit in ischemic outcomes was observed.**
- **Propensity score-adjusted analyses and additional sensitivity analyses revealed similar findings.**



Zocca P. et al. *EuroIntervention* 2017; in press – manuscript will be online published simultaneously



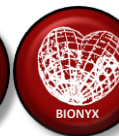
Conclusions

- Treatment during the ticagrelor period was associated with a net increase in event risk as compared to the clopidogrel period.
- During the ticagrelor period, no reduction in ischemic events was found.
- The increased event risk during the ticagrelor period was primarily driven by a higher major bleeding risk. This increase in major bleeding was observed despite more trans-radial procedures, less glycoprotein IIb/IIIa inhibitor use, and more proton pump inhibitor prescriptions during the ticagrelor period – 3 factors that are known to decrease bleeding risk.
- CHANGE DAPT findings should *not* be generalized to ACS patients, who are treated without PCI.

Zocca P. *et al.* *EuroIntervention* 2017; *in press* – to be on-line published today

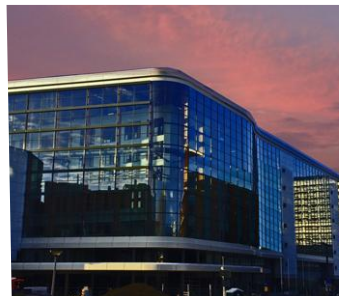
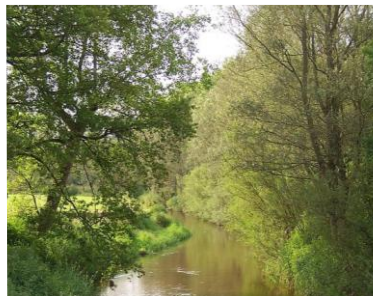


Where or What is Twente?



The Netherlands

Twente



Twente is the name of a region in the Eastern Netherlands, well-known for its beautiful landscapes, stately castles, ground-breaking technology, and infectious innovative spirit. **Thoraxcentrum Twente**, is located in the heart of Enschede, the largest city of the region. The research department of Thoraxcentrum Twente conducts the **TWENTE trials** in cooperation with other medical centers and the **University of Twente**.