



## Comparison of Ticagrelor alone and Ticagrelor with aspirin in post percutaneous intervention patients with respect to Cardiovascular morbidity and bleeding complications- A meta-analysis of Randomized controlled trials

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### Abstract:

The cornerstone therapeutic strategy for post PCI patients has been P2Y12 therapy with Ticagrelor. Ticagrelor while constituting an essential part of post PCI management significantly reducing the cardiovascular mortality has been debated whether to be used with aspirin in patients with high risk of bleeding. While aspirin has remained the gold standard for both primary and secondary prevention of CAD, stopping aspirin safely post PCI while Ticagrelor alone is used is being debated. This meta-analysis will assess the difference between using Ticagrelor alone and stopping aspirin Vs using both aspirin and Ticagrelor post PCI

### Methods

We searched Medline, EMBASE, Cochrane and searched for Randomized controlled trials which compared Ticagrelor alone along with Ticagrelor given with aspirin for 3 months, 8 Randomized controlled trials were included, including the recently published trials in July 2020. A total population of 39,462 were randomized to Ticagrelor alone and Ticagrelor with aspirin and studied for all-cause mortality, cardiovascular outcomes and bleeding complications.

### Results

A total of 39,462 people were randomized post PCI with Ticagrelor alone vs Ticagrelor with aspirin, the primary endpoints were all-cause mortality and bleeding complications. Secondary end-points were cardiovascular mortality including CAD, CHF, MI, Stent thrombosis.

Bleeding complications were measured as BARC(Bleeding Academic Research Consortium), divided into types 1-5, was very significant in favor of Ticagrelor alone with P value of 0.0006. RR was 0.61 [CI 0.46, 0.81].

All-cause mortality was nonsignificant with a p value of 0.18 and relative risk of 0.92 [ CI 0.81, 1.04], heterogene-



ity was zero. Cardiovascular mortality in the form of CAD was nonsignificant with P value of 0.41 and RR of 1.00 [CI 1.00, 1.00].

### Conclusions

In patients with post PCI, there were no difference in all-cause mortality or cardiovascular mortality with Ticagrelor with or without Aspirin, but the bleeding complications were very significant with dual antiplatelet therapy including Ticagrelor and Aspirin. This will reinforce the fact that Ticagrelor alone can be used post-PCI while safely discontinuing aspirin for the first 3 months., thereby reducing bleeding complications without significantly affecting all-cause or cardiac mortality including reemergence of MI or stent thrombosis.

### Biography:

Harini Lakshman is graduate in Internal Medicine 2020. She is studied in Medical school: Bangalore Medical College and Research Institute, Bangalore, Karnataka, India. She went in 2017 because she was married to a person staying in US - and she went for her carrer. She is very very passionate about internal medicine, since it involves a lot of putting together of pieces of puzzles. Her husband Bharath Reddy, research scientist, plant breeding, stays in California and parents- mother, retired teacher; father, businessman, retired. Both stay in India.

### Publication of speakers:

1. Lakshman, Harini & Athwal, Pal & Gondhi, Anitha & Dhillon, Sandaljit & Towfiq, Basim. (2020). A Case of Adult-Onset Still's Disease with Positive Antinuclear Antibodies. Cureus. 10.7759/cureus.10761.

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