

Serial on-treatment Platelet Reactivity of Antiplatelet Therapy in Acute Ischemic Stroke Patients

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Introduction

Single or double antiplatelet therapy (APT), primarily aspirin and clopidogrel is the cornerstone of treatment for acute ischemic stroke (AIS) and recurrent AIS. The use of point-of-care instrument in determining on-treatment platelet reactivity (OTPR) in AIS has yet to be explored.

Objective

We aimed to determine the trend of baseline and serial OTPR of AIS patients during admissions at a tertiary referral centre.

Methodology

Patients admitted with AIS and prescribed with either aspirin or clopidogrel or both were recruited from May 2017 to January 2019. Baseline platelet reactivity (D0) prior of any APT, OTPR at Day 1 (D1) and Day 3 (D3) of admission were assessed by Multiplate®. Aspirin and clopidogrel high OTPR (HOTPR) were expressed as MEA ASPI ≥ 300 AU*min and MEA ADP ≥ 468 AU*min, respectively.

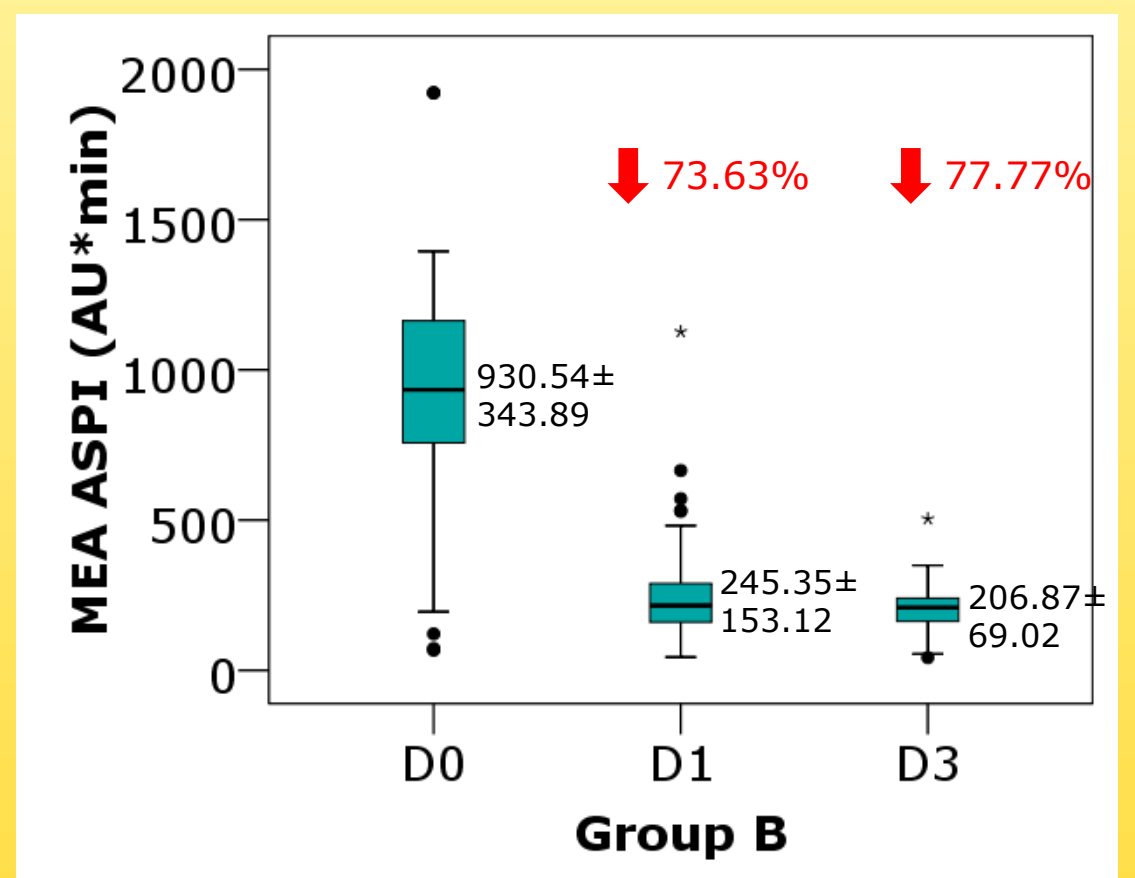
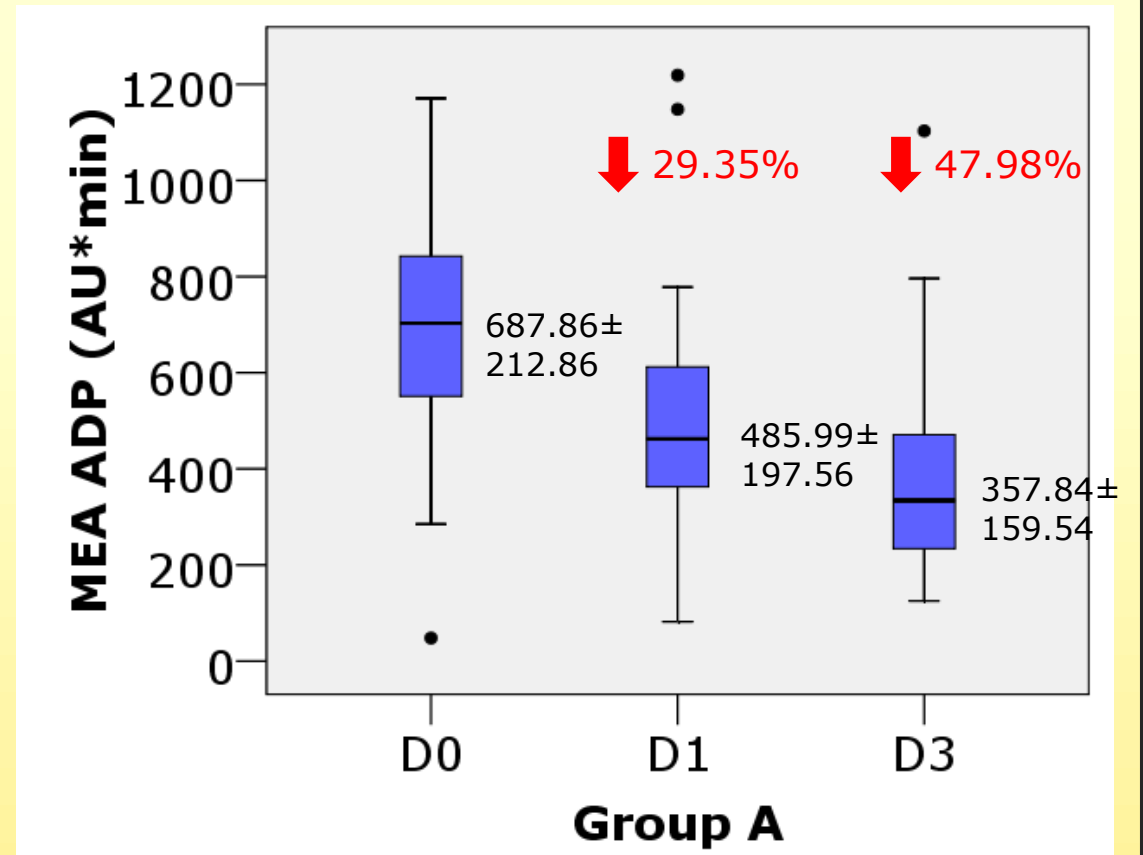
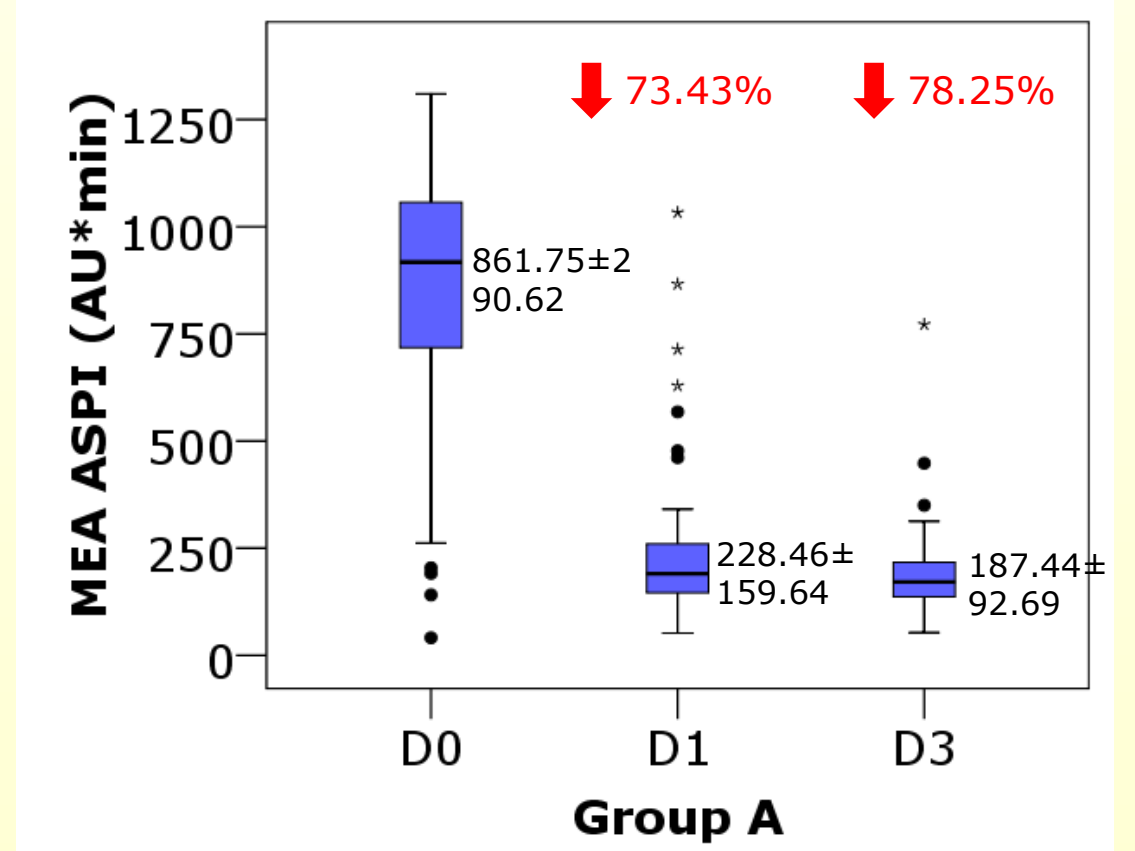
Result

Demographic data (n=180)

Factor (s)	N (%)
Age (Mean± SD)	59.66 (12.37)
Gender (male)	116 (64.4)
Group A (Aspirin and Clopidogrel 75-300mg daily)	88 (48.9)
Group B (Aspirin 75-300mg daily only)	86 (47.8)
Group C (Clopidogrel 75-300mg daily only)	6 (3.3)
Aspirin HOTPR D1	20.1
Aspirin HOTPR D3	5.9
Clopidogrel HOTPR D1	48.4
Clopidogrel HOTPR D3	25.8

Results & Discussion

Boxplot 1-3: Inhibition of platelet aggregation (IPA) at D0, D1, and D3



Conclusion

In patients with AIS prescribed with APT, the OTPR was significantly reduced at D3 from D1.