

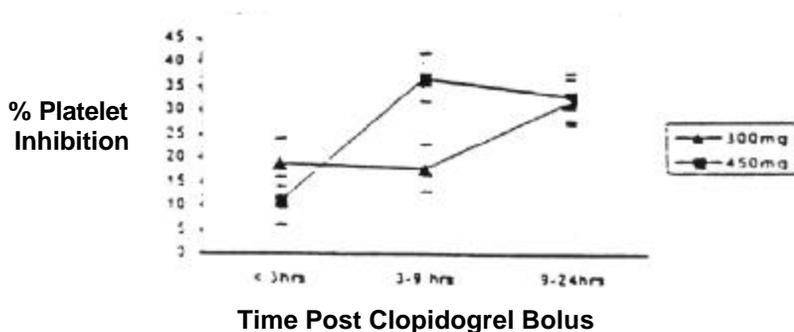
What is the Appropriate Loading Dose of Clopidogrel Prior to Stent Implantation? Insights from a Platelet Inhibition Study

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Background: The optimal loading dose of clopidogrel prior to coronary stenting is still undetermined. Therefore, we prospectively compared the degree of platelet inhibition (PI) following administration of 300mg and 450mg of clopidogrel in pts referred for coronary stenting.

Methods: Clopidogrel was administered as a loading dose of 300mg in 25 pts and 450mg in 66 pts followed by a maintenance dose of 75mg/day. Blood was collected at various time intervals after loading. ADP-mediated platelet aggregation was measured with the ICHOR CBC analyzer (Array Medical) utilizing 20 micromole of ADP. Pts were divided according to the loading dose received (300mg vs 450mg) and according to the time interval from drug loading (<3 hrs, 3-9 hrs, 9-24 hrs). Repeated measures ANOVA with Bonferroni multiple comparison test was used to determine whether there was any difference among groups.

Results: Pts treated with 450mg of clopidogrel had sig higher level of PI ($37 \pm 5\%$ vs $18 \pm 5\%$, $p < 0.05$) only in the time window 3-9 hours post loading with no differences before 3 hrs and after 9 hrs as shown below:



Conclusion: These preliminary data suggest that when clopidogrel is administered as a loading dose prior to coronary intervention, a dose of 450mg appears to double the effect on platelet inhibition compared to 300mg in the time window of 3 to 9 hrs post bolus. The clinical impact of these findings, if validated by randomized trials, should be considered when planning the time of coronary intervention.