長庚大學醫學院臨床醫學研究所
畢業生研究成果

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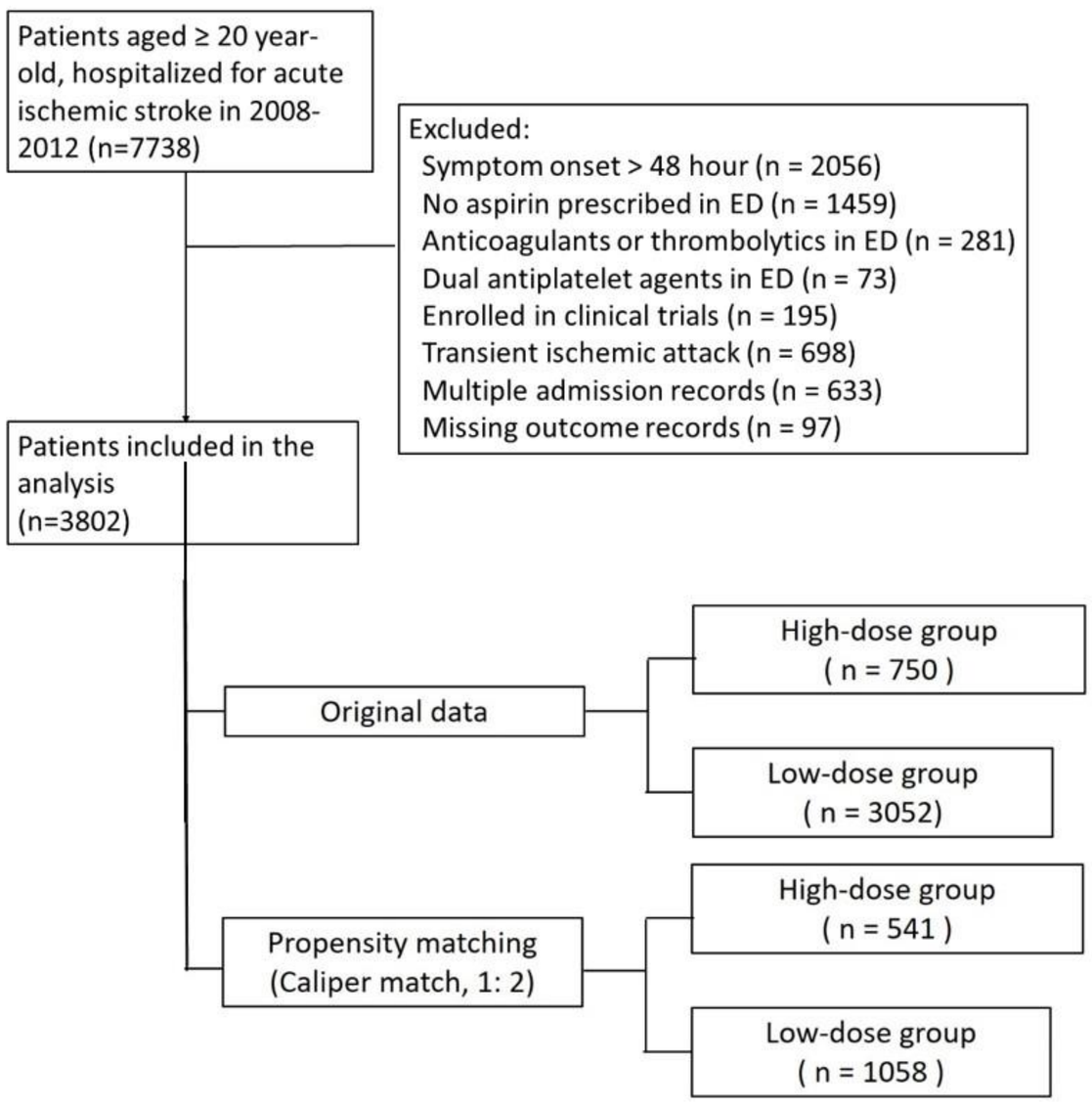
畢業論文題目（中文）：急性缺血性腦中風給予阿司匹林初始劑量之探討研究
畢業論文題目（英文）：The Effects of Aspirin Loading Dose in Acute Ischemic Stroke

Introduction

Aspirin is known to reduce mortality and recurrent vascular events. However, there are no reports about the dose–response of loading aspirin in treating acute ischemic stroke. The objective of this study was to compare the effectiveness of **different loading doses** of **aspirin** in acute ischemic stroke presenting within 48 hours of symptom onset.

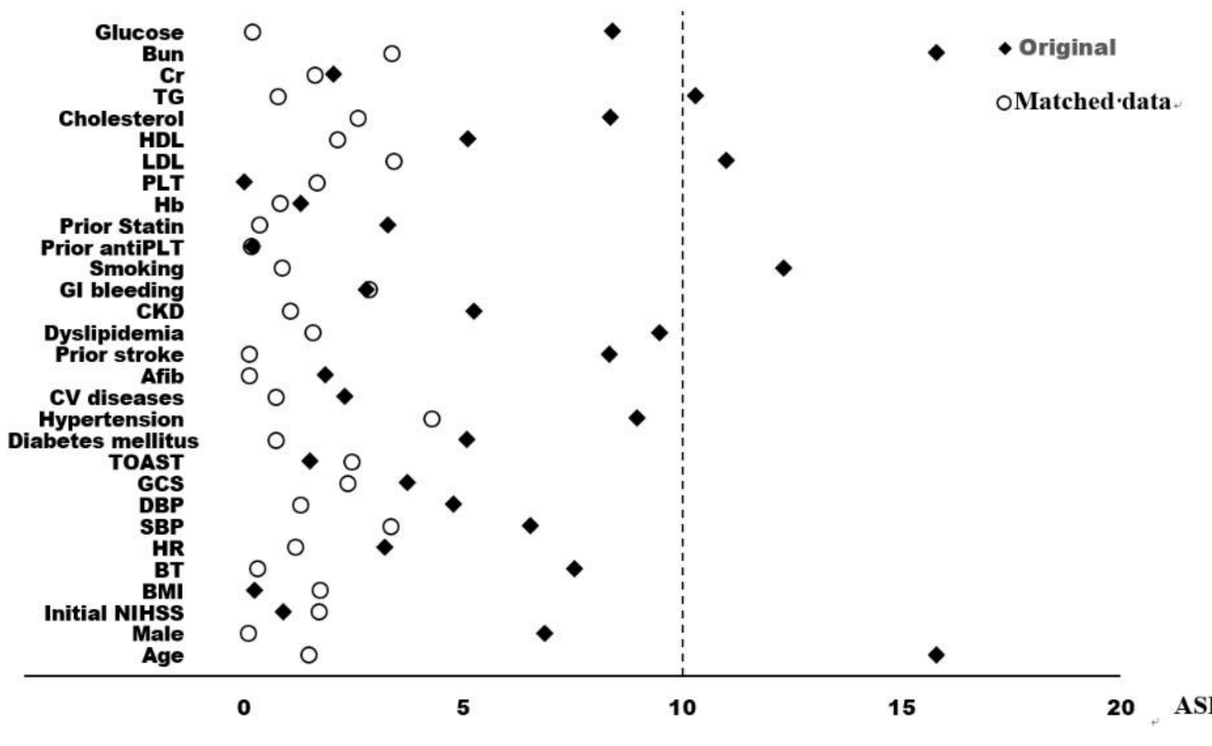


Material and Methods

This was a retrospective hospital-based cohort study from Chang Gung memorials hospitals in 2008 to 2012. Patients were classified as high dose (160-325 mg) or low dose (<160 mg) based on the initial loading amount of aspirin at the emergency department.

The primary outcome measure was a favorable mRS score ≤1 on discharge. Secondary outcomes included in-hospital mortality, stroke progression during admission, and bleeding events.

Propensity score was used to balance baseline characteristics between different treatment groups, and absolute standardized difference (ASD) < 10% was indicated as well balance between groups. After matching, we used multivariable logistic regression with general estimate equation to evaluated the treatment effect. Sensitivity analyses including using different matching algorithms, inverse probability treatment weighting (IPTW) method were used to test the robustness of the results.



Results

From a total of 7,738 available patients, 3,802 patients were included in the study. Among them, 750 patients were in the high-dose group. Patients taking higher loading dose had more favorable clinical outcome on discharge (aOR, 1.57, 95%CI 1.21-2.05), but the risk of mortality, stroke in progression, and bleeding events were not significant different. Sensitivity analyses reported consistent results.

Conclusions

A higher-loading dose of aspirin (160-325 mg) might be more beneficial than a lower loading dose (<160 mg) in treating acute ischemic stroke. within 48 hours.

matched data	cOR	p	aOR	p
Favorable outcomes on discharge (mRS≤1)	1.50 (1.22-1.84)	<.0001	1.57 (1.21-2.05)	0.0008
Mortality during hospitalization	0.66 (0.35-1.26)	0.2095	0.75 (0.37-1.53)	0.4344
Stroke in progression (NIHSS increase ≥4 at discharge)	0.88 (0.57-1.34)	0.5437	1.02 (0.63-1.65)	0.9409
Bleeding events	1.11 (0.70-1.75)	0.6621	1.54 (0.92-2.56)	0.1000