

中文題目：阿斯匹靈使用者發生上下消化道出血之危險因子探討

英文題目：Risk factors for upper and lower gastrointestinal bleeding among aspirin users: an old issue with new findings from a nationwide population-based cohort study

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**Background and aim:** We aimed to identify the risk factors of upper gastrointestinal bleeding (UGIB) and lower GIB (LGIB) among aspirin users after adjusting for confounding factors like age, gender, underlying co-morbidities, and medications.

**Methods:** Using the National Health Insurance Research Database of Taiwan, 6476 aspirin users and 25904 age-, sex-, and enrollment time-matched controls (1:4) were identified for comparison from a cohort dataset of 1,000,000 randomly sampled subjects. Cox proportional hazard regression models were used to identify independent risk factors for UGIB and LGIB in the study cohort and among aspirin users after adjusting for age, gender, underlying co-morbidities, and medications (e.g., non-steroidal anti-inflammatory drugs [NSAIDs], cyclooxygenase-2 inhibitors, steroids, thienopyridines, selective serotonin reuptake inhibitors, warfarin, and bisphosphonate).

**Results:** By Cox proportional hazard regression analysis, aspirin use increased the risk of UGIB (hazard ratio [HR]: 1.38; 95% confidence interval [CI]: 1.18-1.62) and LGIB (HR: 1.12, 95% CI: 1.02-1.24). Age, male gender, coronary artery disease (CAD), diabetes, chronic kidney disease (CKD), cirrhosis, history of peptic ulcer

disease (PUD), PU bleeding (PUB), and use of NSAIDs and thienopyridines were independent risk factors for UGIB among aspirin users, while age, CKD, cirrhosis, history of ischemic stroke, PUD, PUB, and use of NSAIDs were independent risk factors for LGIB.

**Conclusions:** In aspirin users, age, male gender, CAD, diabetes, CKD, cirrhosis, PUD, PUB, and use of NSAIDs and thienopyridines are risk factors for UGIB, while age, CKD, cirrhosis, ischemic stroke, PUD, PUB, and use of NSAIDs are risk factors for LGIB.

**Keywords:** Aspirin; co-morbidities; lower gastrointestinal bleeding; peptic ulcer bleeding; thienopyridines; upper gastrointestinal bleeding