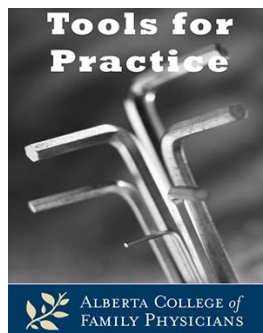


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Anti-platelets after stroke: Are two better than one?

Clinical Question: In non-cardioembolic ischemic stroke, should we treat with two anti-platelet agents (like adding dipyridamole or clopidogrel to ASA) or just one?

Bottom-line: Evidence supports using single agent (ASA or clopidogrel) after stroke or transient ischemic attack. Some evidence favours combined dipyridamole and ASA (DP-ASA, Aggrenox®) but new results question this benefit.

Evidence:

- Over ten meta-analyses examine dual vs. single anti-platelet in secondary stroke prevention.¹⁻¹⁰
 - Interpretation challenged by: inconsistent results, different endpoints, and different inclusion criteria.
 - DP-ASA vs. ASA:
 - Stroke: statistically significant relative risk reduction ~20% with combination.^{1,8}
 - Number Needed to Treat (NNT) 100 over 3.5 years.¹¹
 - No difference in major bleeds.^{1,5}
 - Discontinuation due to headache more common with DP-ASA.
 - Number Needed to Harm (NNH) 16 over two years.¹²
 - New Randomized Controlled Trial (RCT) showed increased stroke with DP-ASA, hazard ratio 1.52 (95% confidence interval: 1.01-2.29).¹³
 - Clopidogrel + ASA vs. clopidogrel (one RCT):¹⁴
 - Similar efficacy for stroke prevention.
 - Major bleeds doubled with combination (NNH 76).
 - Clopidogrel + ASA vs. ASA:
 - Similar efficacy^{1,2} except:
 - Recent Chinese RCT: possible reduced stroke⁵ (NNT 29 over 90 days) when clopidogrel added for 21 days in acute stroke.¹⁵
 - Similar bleeding^{1,4-6} except:
 - One RCT: Possible increased major bleeding (NNH 100) and death (NNH 142) over 3.4 years with combination.¹⁶
 - Clopidogrel vs. DP-ASA (one RCT):¹⁷

- Similar efficacy, less major bleeding with clopidogrel (NNH 200 over 2.5 years).

Context:

- ASA alone is effective, with statistically significant relative risk reduction in:^{1,18}
 - Stroke ~20%; estimated NNT 79 over 6-12 months.
 - Major vascular events ~25%.
- Clopidogrel alone has similar efficacy to ASA alone in stroke.¹⁹
- Guidelines recommend either ASA, DP-ASA, or clopidogrel.²⁰
 - This reflects present evidence (and its inconsistency).
- Costs per 90 days: ASA \$5, clopidogrel \$71, DP-ASA \$94.

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Disclosure:

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