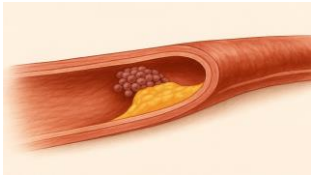

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Antiplatelet Preference

As we age, "gunk" sticks to the coronary vessels, which supply blood to the heart muscle. The cholesterol-rich gunk (aka plaque) narrows the vessels, reducing the delivery of oxygen and nutrients. Plaques can also activate platelets, causing them to stick together and potentially block the coronaries. This may result in an MI. Plaques can also activate the clotting process, block blood flow to the brain, and precipitate a stroke.

Individuals with significant plaque formation (coronary artery disease – CAD) require antiplatelet drugs. These drugs: ASA, Plavix® (clopidogrel), Brilinta® (ticagrelor), and Effient® (prasugrel), make the platelets less sticky and protect against MI and some strokes. ASA and clopidogrel lead the pack in popularity, with ASA edging out its rival due to its low cost, as well as its perceived safety and effectiveness.

ASA's time in the sun may be coming to an end. A large meta-analysis (29,000 CAD patients) of prospective, randomized trials published in The Lancet compared monotherapy with the two agents. The clopidogrel arm had 14% fewer cardiovascular events vs. ASA, with no increased bleeding. In fact, bleeding events trended lower (though not significantly) in the clopidogrel group. Clopidogrel is generic and covered by ODB. It may be a better choice for CV protection secondary to CAD.

ASA + Anticoagulants

Well, I'm after ASA again, but Bayer lost the Aspirin patent after WWII, so how upset can they be? As you read in the first column, ASA is one of the main antiplatelet drugs used to treat CAD. Many of our seniors, and some younger folks as well, have CAD accompanied by conditions that increase blood clotting risk. They require anticoagulants, such as apixaban, to prevent the formation of clots. In seniors, atrial fibrillation (Afib) tops the list of clotting disorders. With Afib, the atria function poorly, and blood can linger in the heart long enough for a clot to form. When that clot is pumped toward the brain, it lodges in the vasculature, starving cerebral tissue and causing a stroke.

Based on the above, treating patients with CAD plus Afib with both ASA and an anticoagulant seems appropriate, or is it? The double-blind, randomized AQUATIC trial (*NEJM)* placed CAD patients with high clotting risk into two groups. One group received an anticoagulant plus ASA 100mg daily, and the other received an anticoagulant plus placebo. All subjects had coronary stents implanted at least six months earlier to open clogged vessels.

The ASA group experienced more (16.9%) adverse outcomes - CV death, MI, stroke, embolic events, and coronary procedures, vs. 12.1% in the placebo group. This was a surprise, as ASA was supposed to prevent these events. The ASA group had more deaths (13.4% vs 8.4%) and more major bleeds (10.2% vs 3.4%) than the placebo group. The conclusion was that ASA-related bleeding was responsible for the additional events and deaths, and that anticoagulant therapy alone should be the treatment choice. A recent meta-analysis in *J Am Coll Cardiol* confirmed that most patients with stable CAD plus Afib should be treated with an anticoagulant alone.

AM Joe + Antibiotic No Go

A new study suggests we may have to forgo our favourite drug, caffeine, if we are taking antibiotics. Caffeine triggers changes in the *E.Coli* membrane, limiting movement of antibiotics like ciprofloxacin into the bacterium. This effect varies among different bacteria (some Salmonella species are unaffected), but it may be a case of better safe than sorry.

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