

EDITORIAL COMMENT

Physicians Addicted to Prescribing Aspirin—a Disorder Of Cardiologists (PAPA-DOC) Syndrome



The Headache of Nonevidence-Based Medicine for Ischemic Heart Disease?*

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“Wrong does not cease to be wrong because the majority share in it.”

—Leo Tolstoy (1)

“There is no such uncertainty as a sure thing.”

—Robert Burns (2)

There are no randomized, placebo-controlled trials, contemporary or historical, showing that aspirin given for longer than 28 days, at any dose, reduces cardiovascular mortality after a myocardial infarction (3). Some large, long-term trials did show a reduction in nonfatal myocardial infarction, but others showed a significant excess. The results of published meta-analyses have been driven by small, outrageously positive trials, suggesting publication bias (4). Aspirin is a fine example of the mess created by people jumping to premature conclusions based on wishful thinking and flawed data. Prescribing aspirin, long-term, has become at least a habit and perhaps an addiction; rehabilitation of offenders is likely to be a long and difficult process with many lapses.

How do we get out of this mess? Ideally, further randomized, placebo-controlled trials should be conducted. This approach requires that patients and physicians agree that it is foolish to continue to

ignore the possibility that aspirin is a waste of time or worse. An environment conducive to fresh trials will only be possible if the intellectual equipoise that uncertainty provides is restored. Being certain and being wrong is a difficult position to extricate oneself from. An apparently safe but useless treatment is still harmful because it displaces other useful interventions and may give a false sense of security.

There are many ways to create a climate of constructive uncertainty. Review of the results of the original trials of chronic aspirin therapy conducted 50 years ago, upon which the antiplatelet secondary prevention meta-analysis depends, might well be enough to change majority opinion (3). Randomized trials do not suggest that withdrawing aspirin from patients with stable coronary artery disease is associated with risk and might be beneficial. The theory that vascular occlusion is always primarily thrombotic is challenged by the evidence that hemorrhage into plaque may often be the primary event (5). Substantial, placebo-controlled trials of aspirin conducted for primary prevention have proved neutral (or worse) thus far, making it feasible to conduct trials in higher risk groups (4). Concerns exist that aspirin may accelerate declines in cognitive dysfunction as well as hearing and visual acuity (4), which might account for why some aspirin-evangelists are unable to follow the scientific arguments proposed by those who take a more critical view of the evidence. Aspirin also increases the risk of hemorrhage, likely contributing to the iron-deficiency anemia that is now highly prevalent in older people with coronary disease.

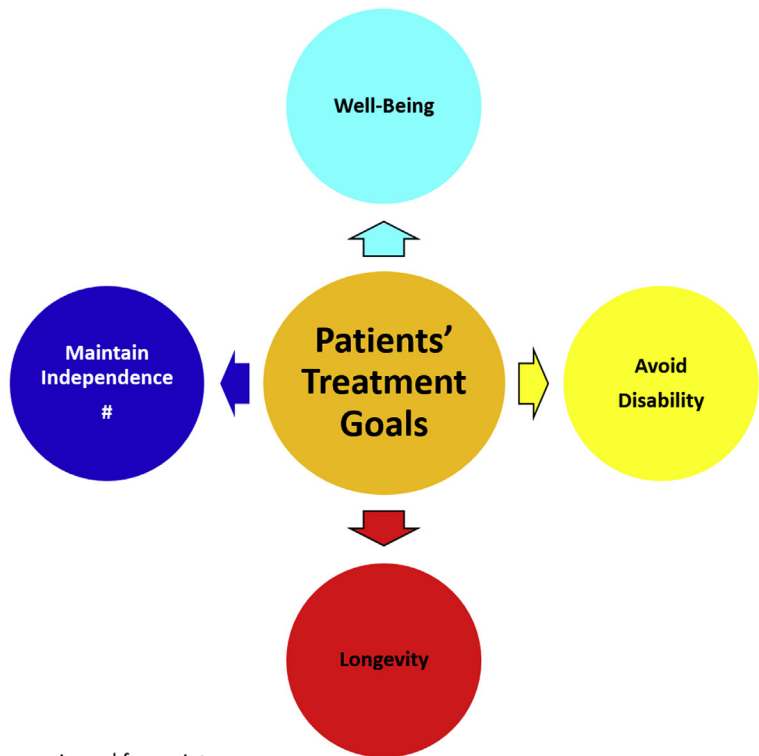
Subgroup analysis of the landmark trials that form the evidence base for guideline-recommended

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FIGURE 1 Goals of and Effects of Treatment for Heart Failure

A



Also a key economic goal for society

B

Reasons for Treatment	RAASN Inhibitors *	Beta-Blockers	CRT *	ICD *	OAC for AF *	Aspirin
Maintain or Restore Well-Being #	☒	☒	☒	-	☒	Worse?
Avoid or Correct Disability ##	☒	?	☒	-	☒	Worse?
Maintain or Restore Independence ###	☒	☒	☒	-	☒	?
Prolong Life (according to the persons wishes)	☒	☒	☒	☒	☒	?

* RAASN = Renin-angiotensin-aldosterone- neprilysin; CRT = cardiac resynchronization therapy; ICD = implantable cardioverter defibrillator; OAC for AF = Oral anti-coagulants for atrial fibrillation

for example by improving symptoms or stopping them getting worse but also by reducing disability
for example, by improving exercise capacity or reducing the risk of disabling stroke
for example, by reducing the need for hospitalization

☒ = evidence demonstrating benefit
? = lack of evidence

A shows the 4 main goals of treatment from a patient's perspective for most illnesses. Well-being and longevity are the 2 most important goals for most individuals. However, avoiding disability and maintaining independence are also important from both an individual and societal perspective. The costs of health-care for chronic disease mainly reflect the costs of managing disability and loss of independence and society bears much of the responsibility for resourcing this through taxes and insurance costs. **B** shows to what extent treatments for heart failure with a reduced left ventricular ejection fraction meet the 4 goals of treatment specified in **A** and that the evidence for aspirin fails in every respect.

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