

Aspirin Resistance in the News

As the debate continues over the exact definition of aspirin “resistance” more analyses are confirming that this clinical phenomenon is real and significantly impacts the outcomes of individuals. Studies such as the following serve to improve our understanding of not only the condition of aspirin resistance but the “cause and effect” between aspirin resistance and poor clinical outcomes:

Aspirin “Resistance” and Risk of Cardiovascular Morbidity: Systematic Review and Meta-analysis. Krasopoulos G, Brister SJ, Beattie WS and Buchanan MR. *BMJ* online, 21 January 2008.

A systemic review and meta-analysis by George Krasopoulos et al. that first appeared in *British Medical Journal* online, addressed 20 studies with a total patient population of 2930 individuals with cardiovascular disease to assess the effect of aspirin resistance on clinical outcomes. 810 (28%) of the patients were classified as aspirin resistant by various methods. A higher percentage of women than men were aspirin resistant. All aspirin resistant patients were at a greater risk of death, acute coronary syndrome, failure in vascular intervention, or a new cerebrovascular event. 39% of aspirin resistant patients compared with 16% of aspirin sensitive patients had a cardiovascular event. The authors concluded that patients who are resistant to aspirin are at a greater risk of clinically important cardiovascular morbidity than patients who are sensitive to aspirin.

Prevalence of Platelet Nonresponsiveness to Aspirin in Patients Treated for Secondary Stroke Prophylaxis and in Patients with Recurrent Ischemic Events. Gengo FM, Rainka M, Robson F et al. *J Clin Pharmacol* 2008 ;48 :335-43.

A prospective study on aspirin response by Francis M. Gengo, et al. from the University at Buffalo was published in the March 2008 issue of the *Journal of Clinical Pharmacology*. The paper describes a 29-month study in 653 consecutive patients who were treated with aspirin (at dosages of <81 mg to >325 mg) for secondary stroke prophylaxis. 129 of these patients (20%) were identified as aspirin non-responders by measuring platelet aggregation in response to collagen and arachidonic acid. When the clinical and demographic data for the patients enrolled in the study was analyzed, a significantly higher percentage of coronary artery disease was found in the non-responsive group.

A total of 87 of the 653 patients suffered another cerebral ischemic event (clinical aspirin failure) while taking aspirin. Of these, 57 (66%) were nonresponsive to aspirin (i.e. demonstrated biochemical aspirin resistance). Only 5% of patients who were responsive to aspirin had a recurrent cerebral ischemic event, compared with a 44% recurrence rate in aspirin non-responders. The data from this study suggests that knowing a patient’s response to aspirin could be useful when making therapeutic decisions.

Aspirin resistance is also a hot topic in publications designed for the general public.

Newsweek, Feb. 11, 2008. In the article “An Aspirin a Day”, Stacey Colino writes: “Is aspirin a wonder drug? When it comes to heart health, the answer is yes—in some situations.” She continues, “the truth is, aspirin can benefit the heart in numerous ways. Besides thinning the blood, making platelets less sticky and preventing blood clots from forming, aspirin also reduces inflammation and may prevent ulceration of fatty plaques in the arteries. But some people are more responsive to these effects than others, and being resistant to aspirin makes people with cardiovascular disease nearly four times more likely to suffer a heart attack or stroke, and almost six times more likely to die from heart disease, according to a new study from Toronto General Hospital and McMaster University, in Canada.”

Parade Magazine, February 10, 2008. Dr. Mark Liponis includes Aspirin Check (a pre-FDA cleared name for the Corgenix AspirinWorks® test) in his list of “5 Medical Tests That May Keep You Well.” According to Dr. Liponis, “Aspirin has been shown to be a powerful preventive measure for people at risk
(continued on page 4)

READER ANNOUNCEMENTS

March 29 – April 1, 2008: The American College of Cardiology (ACC) is holding their 57th Annual Scientific Session at McCormick Place in Chicago, IL. Learn about the latest innovations in cardiovascular science and education. Visit the **Corgenix** booth (#4106) during the exhibition for information on the AspirinWorks® test, and to pick up a copy of our abstract that will be presented at the meeting: **Increased urinary 11-dehydro thromboxane B₂ in diabetes mellitus: an atherothrombotic risk factor?** Geske FJ, Muncy IJ, Oregon-Miranda AA, Garcia-Valladares I, Garcia-De La Torre I, Lopez LR.

May 1-2, 2008: MidwestCoag is sponsoring **The Tenth Annual Symposium on Bleeding and Thrombosis**, at the Westin Hotel in Indianapolis, IN. This year's program has been enhanced with new programs and opportunities for CE credit. We look forward to discussing our products with you at the **Corgenix** display in the exhibit area.

May 15-17, 2008: Internal Medicine 2008, the premier scientific meeting for internists, will be sponsored by the **American College of Physicians** at the Convention Center in Washington, DC. We invite you to stop by the **Corgenix** booth (#2527) during the exhibition to learn about the AspirinWorks® Test and our other diagnostic products.

May 17-22, 2008: Digestive Disease Week® 2008, the premier educational forum for GI professionals, will be held at the Convention Center in San Diego, CA. **Corgenix** looks forward to meeting you at booth #1948 to discuss Hyaluronic Acid and other proposed non-invasive markers for liver fibrosis in chronic liver disease.

June 6-10, 2008: The American Diabetes Association is sponsoring their **68th Scientific Sessions** at the Moscone Center in San Francisco, CA. The conference provides professional education activities that focus on the latest in basic and clinical research in diabetes. The following abstract will be presented at the meeting: **Gender influence on urinary 11-dehydro thromboxane B₂ levels in diabetes mellitus** by Geske FJ, McGlasson D, Muncy IJ, Guyer KE, Oregon-Miranda AA, Garcia-Valladares I, Garcia-De La Torre I, Lopez LR. Stop by the **Corgenix** booth (#127) during the exhibition for a copy of the abstract and to discuss the AspirinWorks test.

READER PRODUCT FEATURE

READS Protein C Antigen Test Kit For *In Vitro* Diagnostic Use

Assay format -	96-well microtiter plate (8 x 12 strips) with breakaway wells
Sample matrix -	Citrated human plasma
Sample dilution -	1:50
Capture antibody-	Rabbit anti-human Protein C
Detection antibody-	Horseradish conjugated (HRP) rabbit anti-human Protein C
Chromogenic substrate -	TMB (single component)
Stopping solution -	0.36N sulfuric acid
Assay incubations	
Sample -	40 min @ room temperature
Conjugate -	10 min @ room temperature
Substrate -	10 min @ room temperature
Wavelength -	450 nm
Assay calibration -	six point reference curve prepared from Reference Plasma included in kit
Assay sensitivity -	≤ 5% of normal

Aspirin Resistance (*cont. from page 3*)

for heart attack and stroke as well as for colon cancer, and it's estimated that as many as 50 million Americans take aspirin daily to prevent a heart attack. What's not clear is the optimal dose of aspirin for prevention. Most people are taking a baby aspirin (81 milligrams), but research has shown that 10% to 20% of people are resistant to aspirin and require higher dosages in order to benefit from its protective effects."

An aspirin check (*AspirinWorks*®) is a test that determines the effectiveness of the daily aspirin for an individual. This is important for people who are taking aspirin therapeutically for cardiovascular disease as well as those at increased risk for heart disease who are taking aspirin for prevention. The test can be ordered by your doctor but also is available directly from an online lab."

Corgenix, Inc.
11575 Main Street, Suite 400
Broomfield, CO 80020, USA

Phone: 303-457-4345
Toll Free: 800-729-5661
Fax 303-457-4519

Website: www.corgenixonline.com
Email: techsupport@corgenix.com

**Specialists in ELISA
diagnostic technology**