

Successful Treatment of Universal Reactors with Prophylactic Aspirin A Preliminary Report

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Key Words

Aspirin, universal reactor, food allergy, petrochemical hypersensitivity, angina, myocardial infarction.

Summary

Universal Reactors were prophylactically treated with aspirin in doses as low as 1/4 - 1/2 - 1 tablet (standard full tablet = 325 mg.) on alternate days or every third day. Aspirin ameliorated symptoms of patients who were exposed to known intolerable foods or petrochemical inhalants.

Universal reactors are individuals who are extremely sensitive to a majority of the components in the environment, i.e., inhalants, ingestants, and endogenous substances. This preliminary report concerns the benefits derived by a sample of these individuals from the use of prophylactic aspirin.

Prophylactic administration of aspirin to universal reactors was prescribed in doses of 1/4 - 1/2-1 tablet (one standard tablet = 325 mg.) on alternate days or every third day. This resulted in mitigation or total ablation of expected reactions to known intolerable foods and petrochemical inhalants'. To protect these hypersensitive patients from gastric irritation, portions of tablets were crushed into powder and mixed with equal parts of calcium carbonate powder (Freeda Vitamins, Inc., 36 East 41st St., New York, NY 10017). The mixture was put into 00-size clear empty gelatin capsules (Eli Lilly and Company, Indianapolis, IN 46285). The capsules were taken in the middle of breakfast with liberal amounts of water. Tolerance was excellent, even in patients who had previously experienced some gastric discomfort with the use of aspirin.

Commercially available buffered aspirin was avoided because of the aluminum content, an unnecessary additive. An additional consideration was thoughts about Alzheimer's disease and reported increased amounts of aluminum found in autopsied brain tissue. Whether there is a connection or not between aluminum and Alzheimer's disease remains to be discovered. It was felt at this time that a conservative policy of avoidance was the best course of action.

The protective effect of aspirin was achieved after a few hours. Patients who hitherto had a mild or moderate reaction to a food or petrochemical inhalant could generally tolerate the previously intolerable insult. Patients who previously had a severe reaction to a substance still had reactions; however, these were ameliorated.

Some patients who had immediate or intermediate reactions experience benefit. Patients who experienced the most benefit were those who had a *delayed* type of hypersensitivity reaction to foods and petrochemical inhalants (i.e., had these reactions 1/2 - 1 day after the instigating exposure). It is as if these delayed reactions involve a "domino effect", and the aspirin was only able to *prevent the first "domino" from falling* — thus averting the entire sequential problem which would have occurred if the "blocked domino" had fallen. This might explain the *efficacy of prophylactic* aspirin therapy and the *ineffectiveness* of taking aspirin *after* the reaction had culminated.

The *duration* of effectiveness of prophylactic aspirin goes beyond the usual expected four to six hours of benefit associated with the use of aspirin for the purposes of analgesia or hypothermia. The benefit apparently lasts for *days* after a single dose of 1/4 - 1/2 tablet. It is conjectured that the explanation may involve the *irreversible* acetylation that occurs in the platelets and

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which lasts for the lifetime of the platelets (8-11 days). This irreversible acetylation takes place in serine, at the active site of platelet cyclooxygenase, thus permanently preventing the synthesis of thromboxane A2 for the lifetime of the platelet². A dose as small as 40 mg. is reported to be sufficient to produce this effect³.

Treatment Considerations:

1. Allergy/hypersensitivity

Patients should be screened for aspirin allergy and aspirin idiosyncrasy syndrome. For both of these conditions, taking a thorough history is essential. In addition, at times a very small trial dose administered under appropriate medical conditions may be necessary if the history is not clear.

2. Increased bleeding time

Treatment with aspirin affects platelet function for the lifetime of the platelet. This results, among other things, in an increase in bleeding time. If surgery is anticipated, aspirin should be stopped at least 11 days prior to surgery.

3. Hemolysis

Patients having a glucose-6-phosphate dehydrogenase deficiency can develop a mild degree of hemolysis. Check patients for this deficiency prior to treatment.

4. Screen for gastric and duodenal ulcer.

5. Screen for hepatic and renal disease.

Case Histories of Universal Reactors Treated With Aspirin

The previous treatment for all of these patients essentially revolved around the modality of avoidance of troublesome substances. Treatment with selenium and vitamins in regard to petrochemical sensitivity was of some help in certain cases. Use of sublingual hyposensitization in regard to food and chemical hypersensitivity was of some help in selected cases. However, despite these attempts at therapy, all these universal reactors continued to have significant symptoms. Aspirin therapy was significantly helpful in these cases.

Patient: J. F. 14429

History: This is a 45-year-old white female whose multiple symptoms include headache, gastrointestinal complaints, and fatigue on exposure to a variety of foods and petrochemical inhalants.

Treatment: One tablet every third day.

Results: Substantially increased tolerance to previously intolerable foods and chemicals. Some substances which hitherto gave symptoms now do not produce symptoms at all. The patient reports a general salubrious effect in regard to increased energy.

Patient: J. B. 26317

History: This is a 39-year-old white female whose multiple symptoms include marked hyperirritability, headaches, difficulty concentrating, and fatigue on exposure to inhaled or ingested petrochemicals or fungi and yeast — even in minute quantities.

Treatment: 1/2 tablet every other day.

Results: The patient still reacts but the reactions are substantially mitigated and more easily dealt with.

Patient: G.D. 27576

History: This is a 46-year-old white female severely sensitive to petrochemicals and moderately to extremely sensitive to foods. Symptoms include syncope, blurred vision, headache, vertigo, difficulty concentrating, rhinitis, laryngitis, asthma, tachycardia, and arthralgia.

Treatment: 1/4 tablet every third day. The patient was unable to tolerate any more aspirin than this, as even the aspirin was to some extent provocative in higher doses. She is currently trying to slowly escalate her dose.

Results: She still has symptoms, but they are mitigated in severity and duration.

Patient: J. B. 28879

History: This is a 29-year-old white male with a history of headaches, gastrointestinal complaints, myalgia, and hyperirritability primarily due to food hypersensitivity.

Treatment: This patient had a previous history of gastric irritation with the use of aspirin. The use of the calcium carbonate, as above described, mitigated this problem. A further lessening of this problem was achieved by dividing the aspirin dose in half, as follows: one-half tablet of aspirin in the

morning and the other half with supper. This dose was effective even by stretching the interval between doses to five to seven days because of this history of gastric irritability. It is conjectured that a slightly shorter interval would probably be more effective (but unfortunately more irritating). Various dosage schedules are still being experimented with.

Results: The patient now tolerates a wide variety of foods, and his symptoms are substantially mitigated.

Patient: B.G. 28907

History: This is a 35-year-old white female with a great variety of food intolerances. Her symptoms are atopic dermatitis, difficulty concentrating, forgetfulness, rhinitis, laryngitis, asthma, arthralgia, and fatigue.

Treatment: One tablet twice a week.

Results: All symptoms were mitigated, and the patient now tolerates a wider variety of foods.

A comment should be made concerning another condition in which prophylactic aspirin is used and in which a similar mechanism may be operative: the prevention of angina and myocardial infarction^{4 5 6}. The general consensus is that the effectiveness of aspirin in this regard is via its antithromboplastic effect via decreased platelet aggregation. Is this the only beneficial mechanism operative? It can be speculated that this cardiovascular effectiveness may involve an immunological component as well.

An immunological etiology for some forms of vascular disease has been related to food and inhalant hypersensitivity⁷. An increased incidence of myocardial infarctions related to food hypersensitivity has been described⁸. Is the benefit derived from the use of prophylactic aspirin in reducing angina and myocardial infarctions due to protection from immunological reactions to foods

and chemicals as well as its antithromboplastic effect?

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Addendum

After this article was submitted, a colleague brought to my attention that an experiment had been done at Guy's Hospital Medical School in London in which aspirin was able to prophylactically prevent food allergy reactions:

Buisseret PD. Allergy. *Sci. Am.* 247:2 (August 1982), pp 86-95.