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The Ohsaki Study: Does Green Tea Consumption Impact Mortality?

Source: Kuriyama S, et al. *JAMA*. 2006;296:1255-1265.

OTHER THAN WATER, TEA IS THE MOST oft-consumed beverage in the world. Animal studies and in vitro data support the potential role of green tea consumption (GTC) for reducing cardiovascular disease and cancer.

The Ohsaki Study is the largest trial (n = 40,530) to prospectively study the relationship between GTC consumption and the end points of CV disease, cancer, and overall mortality. Using a cohort study methodology, investigators analyzed the association between GTC (divided into quartiles) and end points observed for 11 years of followup.

GTC was inversely associated with all-cause mortality, such that for those in the top quartile of GTC men enjoyed a 12% reduction in hazard ratio for mortality, and women a 23% reduction. Since all-cause mortality is primarily driven by cardiovascular disease (CVD), it should come as no surprise that CVD was also inversely related to GTC. For instance, those women who consumed more than 5 cups/d of green tea (top quartile) had a 31% lower CVD mortality than women in the lowest quartile (< 1 cup/d). No relationship between GTC and cancer was discernible.

Although there are some conflicting studies, two prior trials have also seen a favorable relationship between GTC and cardiovascular end points. The mechanism of benefit is uncertain, although it is postulated that phenols from green tea might favorably impact development of atherosclerosis through antioxidant or free-radical scavenging. Black tea and oolong tea consumption, which were also included in the data analysis, did not show similar benefits. ■

Do Ethnicities Differ in Response to Spironolactone?

Source: Cavallari LH, et al. *CHF*. 2006;12:200-205.

THANKS TO THE FAVORABLE RESULTS from the RALES trial (Randomized Aldactone Evaluation Study), clinicians commonly employ spironolactone (SPIR) as part of a standard treatment regimen for CHF, in addition to ACE inhibitors and Beta Blockers. Indeed, the emerging enthusiasm for including SPIR as part of the therapeutic CHF regimen has resulted in a visible increase in hyperkalemia in some populations. Interestingly, retrospective data suggests that African Americans may respond differently to spironolactone than Caucasians: they may develop lesser increases in serum potassium (K+).

Patients (n = 51) with systolic CHF from heart failure clinics in Illinois were enrolled predicated on their receiving stable and appropriate doses of ACE inhibitors (and/or ARBs) and beta blockers, and being normokalemic at baseline. All patients then received spironolactone titrated to 25 mg/d.

The median increase in K+ differed dramatically between African Americans and Caucasians: 0.1 mEq vs 0.5 mEq; K+ concentrations greater than 5.0 mEq/L occurred in 8% of African Americans, but 41% of Caucasians.

These differences were present even though there were no demonstrable differences in renal function or diuretic therapy. Similarly, aldosterone levels did not show meaningful ethnic disparity.

The mechanisms responsible for differences in propensity for increases in K+ remain uncertain. It appears that Caucasians are more susceptible to spironolactone induced increases in K+ than African Americans. ■

MRSA: Once the Exception, Now the Rule

Source: Moran GJ, et al. *N Engl J Med*. 2006;355:666-674.

MRSA IS A RELATIVE NEWCOMER to the bacterial pathogen scene, being first identified in the 1960s. A decade ago, clinicians thought of MRSA as a typically hospital-acquired pathogen, and rarely identified it from healthy persons in the ambulatory setting. Today, the epidemiologic presence of MRSA in both hospital settings and amongst ostensibly healthy patients without risk factors in the ambulatory setting calls for enhanced clinician awareness of this pathogen and its appropriate treatment.

Moran et al sought to characterize the prevalence of MRSA from diverse communities around the US. They studied bacterial isolates from adult patients presenting to emergency rooms with skin or soft tissue infections in 11 different cities across the United States: Albuquerque, Atlanta, Charlotte, Kansas City,

LA, Minneapolis, New Orleans, New York, Philadelphia, Phoenix, and Portland.

Of the 422 patients presenting with skin/soft-tissue infections at these sites, 76% were caused by Staphylococcus, over half of which (59%) were MRSA. In over half the cases, prescribed antibiotics would not have been successful based upon culture and sensitivity results. MRSA was sensitive to clindamycin, trimethoprim/sulfamethoxazole, or tetracycline more than 90% of the time.

Because of the high prevalence and evolving resistance pattern of MRSA, clinicians would be wise to routinely culture patients with skin and soft-tissue infections, and consider antibiotic choices based upon prevailing sensitivity data. ■

Does Glucose Monitoring Really Help Type 2 Diabetics?

Source: Davis WA, et al. *Diabetes Care.* 2006;29:1764-1770.

Tight glucose control has been shown to provide improved outcomes in both Type 1 and Type 2 diabetes (DM2). Although intuitively one would assume that self-monitoring of blood glucose (SMBG) in DM2 would improve glucose control, 5 randomized controlled trials have failed to conclusively confirm this notion. Since SMBG requires substantial time, energy and resources, we would like to have an evidence base which confirms benefits to the patient.

Study subjects (n = 1,286) comprised participants in the Fremantle Diabetes Study of western Australia. At baseline, 70% of subjects utilized SMBG, allowing a substantial comparison group of 'non-users.' The median frequency of SMBG was 4 tests weekly. Data were compiled based upon 5 years of observation.

A1c control was not found to be superior in persons utilizing SMBG vs persons who did not perform SMBG. In Australia, SMBG per patient costs an average of $123/yr (United States dollars), without considering the actual price of the glucometer. Although SMBG can be useful for confirming hypoglycemia, convincing evidence of meaningful benefit in improving A1c control remains to be presented. ■

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CV Risk in Migraineurs

Source: Kurth T, et al. *JAMA.* 2006;296:283-291. Erratum in: *JAMA.* 2006;296:654.

Several studies have suggested that migraine (MIG), particularly MIG with aura (MIG/a), is associated with increased risk of ischemic stroke. Less data have accrued to study the relationship between MIG and other ischemic vascular end points, such as myocardial infarction (MI). Since the prevalence of MIG in women is three times that of men (18% vs 6%), the Women's Health Study (WHS) provides an appropriate population of healthy women (n = 27,840) in whom we may observe the cardiovascular outcomes of migraineurs over time.

In concordance with established prevalence data, 18.4% of WHS participants reported MIG, of which 40% had MIG/a. In an earlier report from the WHS, a six-year followup did not detect any relationship between MI and migraine. The 10-year followup looks distinctly different.

The hazard ratio for major cardiovascular disease among women with MIG/a was more than double that of women without MIG. Specifically looking at MI, the hazard ratio was also doubled (HR = 2.08; $P = .002$)

The population of women with MIG but no aura was *not* demonstrated to be at increased cardiovascular risk in this population. The factors that place persons with MIG/a (as opposed to simple MIG) at greater ischemic CV risk remain to be elucidated. ■

Motorcycling and Erectile Dysfunction

Source: Ochiai A, et al. *Int J Impot Research*. 2006;18:396-399.

Numerous reports have indicated a relationship between bicycling and erectile dysfunction (ED). Even when overt sexual dysfunction is not apparent, bicycling has been shown to alter penile sensation in some subjects. Such findings have been attributed to ischemic neuropathy secondary to mechanical compression. Motorcycling involves similar postural events, albeit with different saddle design; additional vibration forces occur with motorcycling that are not seen with bicycling, which could also impact development of neuropathic sequelae. There have not been any studies previously of the relationship between motorcycling and ED.

Members of an amateur motorcycle club in Japan (n = 244) form the data base for this study. Erectile function was measured by means of the IIEF, a 5-item questionnaire validated for identification and monitoring of ED. On the IIEF, a normal point score ≥ 26; in this trial, ED was defined as a score < 22.

Compared to prevalence data generated by the Massachusetts Male Aging Study, the prevalence of ED in the motorcycle club was surprising: 58% (age, 20-29), 63% (age, 30-39), 76% (age, 40-49), and 93% (age, 50-59). The majority of ED was mild-moderate degree. For men with ED, clinicians may wish to inquire about motorcycling activity. ■