Clinical Briefs in Primary Care™

Evidence-based updates in primary care medicine

By Louis Kuritzky, MD

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Ambulatory BP Monitoring

Source: Turner JR, et al. *Am J Medicine* 2015;128:14-20.

The benefits of hypertension treatment (HTN), often cited as a 25% reduction in myocardial infarction, 40% reduction in stroke, and 50% reduction in heart failure, have generally been demonstrated in clinical trials based on an office blood pressure measurement. Since a substantial minority of patients enrolled in HTN trials — approximately one-third according to numerous estimates — ultimately turn out to have white coat HTN (wc-HTN), we may be underestimating the actual benefits of HTN treatment. Patients with wc-HTN do not suffer the same increased risk of cardiovascular events as HTN patients; hence, their inclusion in HTN trials "dilutes" treatment effects.

Since 2011, the United Kingdom regulatory agency NICE (National Institute for Health and Care Excellence) has asked that primary care clinicians obtain ambulatory blood pressure monitoring (ABPM) on all patients suspected of HTN prior to initiation of treatment. Why? Because no treatment is indicated in the one-third of patients who typically turn out to have wc-HTN. United Kingdom calculations indicate that routine application of ABPM in primary care will save tens of millions of dollars.

ABPM is the most accurate tool for identifying wc-HTN. Additionally, it can help ascertain whether symptoms such as dizziness are potentially related to hypotensive episodes. It can also demonstrate whether treatment is truly providing 24-hour control of blood pressure, which is usually not discernible in typical office practice where patients are evaluated during daytime hours.

ABPM is a much better predictor of cardiovascular risk than office blood pressure readings. At the current time in the United States Medicare only pays for ABPM when the diagnosis of wc-HTN is utilized. Private insurance coverage for ABPM varies. More routine inclusion of ABPM would likely help to clarify important HTN-related issues. ■

A New Oral Treatment for Hyperkalemia: Patiromer

Source: Weir MR, et al. *N Engl J Med* 2015;372:211-221.

Patiromer (PAT) is an oral non-absorbable polymer that works by binding potassium (K+) in exchange for calcium in the distal colon. Currently available oral treatments for hyperkalemia are burdened by GI adverse effects as well as limited efficacy. Hyperkalemia is particularly problematic in chronic kidney disease (CKD), which may be compounded by the need to administer ACE inhibitors or angiotensin II receptor blockers (ARB).

Weir et al performed a clinical trial of PAT in hyperkalemic patients with CKD stage 3 or 4 (eGFR = 15-59) who had been on a stable dose of ACE inhibitors or ARB for at least 4 weeks. Mild hyperkalemia (K+ = 5.1-5.4 mmol/L) was treated with PAT 4.2 g BID, and moderate-severe hyperkalemia (K+ = 5.5-6.4 mmol/L) with PAT 8.4 g BID.

At the end of 4 weeks, 76% of hyperkalemic patients treated with PAT had reached their target K+ of 3.8-5.0 mmol/L. Re-randomization to placebo or PAT for an additional 8 weeks showed that 85% of PAT-treated patients remained normokalemic, whereas 60% of placebo recipients drifted back into hyperkalemia. PAT was well tolerated: 11% of PAT patients experienced mild-moderate constipation.

PAT shows great promise as a new treatment for hyperkalemia. ■

Obesity Leads to Overdiagnosis of Airflow Obstruction

Source: Collins BF, et al. *Chest* 2014; 146:1513-1520.

Some commonplace disorders can readily misdirect clinicians about the presence of other important diagnoses. For instance, in patients with chronic obstructive pulmonary disease (COPD), deterioration of cardiac function, leading to congestive heart failure, can easily be misinterpreted as worsening COPD since fatigue, exercise, intolerance, and dyspnea are common to both. Could obesity misdirect clinicians in their diagnostic process for COPD? This report from the Veterans Administration system suggests that it can.

Collins et al reviewed data of obese veterans diagnosed with COPD who had undergone spirometry. Approximately half of COPD patients did not demonstrate airflow obstruction (necessary for the diagnosis of COPD) upon spirometry. After spirometry was performed, obese persons were less likely than normal weight individuals to have inhaler medications de-

creased or discontinued. The data found that as the degree of obesity increased in these COPD patients, the likelihood that airflow obstruction would be found on spirometry decreased.

Although clinicians may be tempted to diagnose COPD based simply on symptoms alone, these data indicate that obese patients are particularly likely to be misdiagnosed with COPD, incurring potentially inappropriate medications and distracting clinicians from attaining a correct diagnosis to explain patients' symptoms. Clinicians would be wise to follow clinical guidelines that indicate spirometry as the gold standard for COPD diagnosis. ■

Modifying the Home Environment to Prevent Falls

Source: Keall MD, et al. *Lancet* 2015; 385:231-38

Falls in the home setting are a commonplace source of serious injury. In the recent past, most studies to address falls have addressed children, disabled persons, or the elderly. There is little information on more general populations, or whether a standardized set of environmental modifications — not designed to address any specific disability — would reduce falls and their consequences.

Keall et al studied households (n = 842) in New Zealand, including persons of all ages. Subjects were identified as holders of what is called a "community services card," which indicates that the person is low income, unemployed, a student, older than age 65 years, or receives governmental health benefits related to illness.

Half of the homes in the study received no intervention. The other half received home modifications that included handrails for steps and stairs (inside and out), repairs to window catches, tub and toilet grab-rails, good-quality outside lighting, high-visibility and slip-resistant edging for outside steps, securing of carpet edges, non-slip bathmats, slip-resistant resurfacing for decks/patios, and a pamphlet on home safety. All modifications were provided free of charge by a qualified builder.

Compared to non-intervention homes (control) over the 3-year period of observation, home modification reduced falls by 26% per year and all injuries by 39% per year (both statistically significant).

The average cost of the intervention was $564 New Zealand dollars, which, by current currency conversion charts, is $423 U.S. dollars. ■

Every-other-day Tadalafil for Lower Urinary Tract Symptoms and Erectile Dysfunction

Source: Choi H, et al. *Int J Impot Res* 2014;27:33-37.

Although the incidence of erectile dysfunction (ED) and lower urinary tract symptoms (LUTS) both increase with age, there is an as-yet ill-explained independent association of LUTS with ED. That is, within each age decile, more severe LUTS is associated with more severe ED.

The PDE-5 inhibitor tadalafil is approved for treatment of LUTS or ED. The dose used to treat LUTS is less than the usually effective dose for ED, but men treating LUTS with low-dose tadalafil (5 mg daily) also report improvements in sexual function.

Tadalfil has the longest half-life of currently available PDE5 inhibitors: 18.5 hours. Based on this long half-life, might tadalafil provide similar symptom improvement in LUTS and ED if provided every other day?

Choi et al performed a trial in men (n = 144) with symptom scores consistent with LUTS and ED to compare 5 mg tadalafil daily vs every other day. LUTS symptoms and sexual dysfunction symptoms improved to a similar degree with both regimens. Although there were some differences in outcomes that were statistically significant in favor of the daily regimen, differences were generally small and of doubtful clinical significance. Men may achieve comparable symptom improvement for ED and LUTS using tadalafil 5 mg every other day, as with everyday dosing. ■

Reassuring Safety Data about Incretins and CHF

Source: Yu, et al. *Diabetes Care* 2015;38: 277-284.

The class of medications used to treat diabetes (and obesity) known as "the incretins" includes several DPP4 inhibitors and GLP1 agonists. These agents have achieved a favorable status in prescribing algorithms because of the combination of their low risk of hypoglycemia, impact upon weight (neutral for DPP4, weight loss for GLP1), and effects on postprandial glucose attributed to glucagon blunting.

Nonetheless, analysis of the SAVOR-TIMI trial, in which a 27% increased risk of congestive heart failure (CHF) was found in persons taking saxagliptin compared to placebo spurred concerns that incretins might worsen risk for CHF. Other trials with other DPP4 inhibitors did not find a statistically significant increased CHF risk (e.g., the EXAMINE trial with alogliptin).

Yu et al performed a nested case-control analysis of diabetic patients who received new prescriptions for antidiabetic drugs and were free of CHF at that time. They compared incidence of CHF in patients who had been prescribed incretins vs two or more other oral agents for their diabetes.

Among a population of 57,737 diabetics, 1118 incident cases of CHF were identified. Incident CHF was not more common in persons prescribed incretins; to the contrary, there was a trend toward less CHF in incretin-treated patients (odds ratio = 0.85, confidence interval, 0.62-1.16). These data are reassuring about the safety profile of incretins in regards to CHF. ■

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Executive Editor: Leslie Coplin.
Editor: Stephen Brunton, MD.
Managing Editor: Leslie Hamlin.

Subscriber Information
Customer Service: 1-800-688-2421
E-Mail Address: leslie.hamlin@ahcmedia.com
World Wide Web: www.ahcmedia.com
Address Correspondence to: AHC Media, One Atlanta Plaza, 950 East Paces Ferry Road NE, Suite 2850, Atlanta, GA 30326.

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