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Lipids vs Lipoproteins vs Particle Number

ABSTRACT & COMMENTARY

By Michael H. Crawford, MD

Professor of Medicine, University of California, San Francisco, Chief of Clinical Cardiology, University of California, San Francisco Medical Center, CA

Dr. Crawford reports no financial relationships relevant to this field of study. This article originally appeared in the July issue of Clinical Cardiology Alert.

Synopsis: *In this study population with a 2% average risk of a major coronary event per year, LDL cholesterol, apolipoproteins, and LDL particle concentrations had similar and strong associations for major vascular events. The independent predictive value of HDL measures is less clear.*

Source: Parish S, et al. Lipids and lipoproteins and risk of different vascular events in the MRC/BHF heart protection study. *Circulation* 2012;125:2469-2478.

Conflicting results from prior studies have created controversy regarding the value of apolipoproteins and lipid particle measures in predicting the risk of atherosclerotic vascular disease in presumably healthy individuals. Thus, these investigators from the United Kingdom analyzed the Heart Protection Study (HPS) data to address this issue. The previously reported HPS studied more than 20,000 men and women over age 40 years who either had known cardiovascular disease or were at high risk for it and had a total cholesterol > 135 mg/dL. The subjects were randomized to simvastatin 40 mg daily or a placebo and treated for 5 years. For this analysis, baseline blood cholesterol fractions, apolipoproteins A1 and B, and lipoprotein particles assessed by nuclear magnetic resonance were associated with the > 5000 vascular events in the trial. The results were adjusted for baseline vascular disease. Major coronary events were associated with all LDL measures, including particle size and number in both the statin and placebo arms. The strengths of these

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associations were quite similar (hazard ratios 1.15-1.35). HDL concentrations were as good or better at predicting major vascular events as any of the HDL subclasses. However, the predictive power of HDL was partly explained by LDL measures and prior vascular disease reducing the strength of the associations. Interestingly, stroke was not significantly associated with HDL measures. The authors conclude that in this population with a 2% average risk of a major coronary event per year, LDL cholesterol, apolipoproteins, and LDL particle concentrations had similar and strong associations for major vascular events. The independent predictive value of HDL measures is less clear.

■ COMMENTARY

For those of us who do not routinely measure more than total cholesterol (C), LDL-C, HDL-C, and triglycerides level, this study supports the utility of this simple approach. The strengths of this study were that it was large (> 20,000), prospective, and had a large number of events (> 5000). Also, the results were adjusted for prior vascular disease and other risk factors, including BNP levels. In addition, they measured lipids almost every way possible, including apolipoproteins and particle size and number. Finally, the results agreed with the results of two large, observational studies in apparently healthy adults. A Framingham study of apolipoproteins A1 and B did not demonstrate their superiority over the standard lipid panel. The Women's Health Study evaluated NMR derived particle size and number with the same result. Thus, I believe the weight of evidence supports that the standard lipid panel is adequate for risk stratification of adults with regard to cardiovascular disease risk. Are there patients who might benefit from a more extensive and expensive analysis of their lipids? There probably are at the extremes of our experience — for example, the patient with a terrible family history, but no apparent risk factors; or the patient with a vascular event and no evident risk factors — but such individuals are rare.

The weak predictive power of HDL was interesting in this study. This is different from that reported in the Framingham and the Women's Health Study. The latter were primary prevention populations, whereas this study involved those with known or at high risk for cardiovascular disease. Other studies, and now this one, show that pre-existing disease attenuates the predictive power of HDL for future events. In fact, in this study elevated BNP was noted to markedly reduce the predictive power of HDL. This is perhaps good news in secondary prevention, given the paucity of treatments for low HDL. However, low HDL levels remain a concern in primary prevention. Right now I'm recommending more exercise for low HDL — it can't hurt! ■

Diabetes as a Risk Factor for Hematologic Malignancy

ABSTRACT & COMMENTARY

By William B. Ershler, MD

Dr. Ershler is Director, Institute for Advanced Studies in Aging, Washington, DC

Dr. Ershler reports no financial relationships relevant to this field of study. This article originally appeared in the July issue of Clinical Oncology Alert.

Synopsis: *In a meta-analysis of current observational (both case-control and prospective cohort) studies evaluating the potential association between type 2 diabetes mellitus and the incidence of hematological malignancy, an increased risk for non-Hodgkin lymphoma and leukemia was demonstrated as well as a trend toward an increased risk for myeloma. Confounding factors such as age, obesity, smoking, and alcohol (risks for both diabetes and malignancy) could not be completely accounted for in such an analysis. However, certain potential mechanisms, such as increased inflammatory cytokines and over expression of insulin-like growth factor, known features of diabetes, may also be of importance in the development of certain hematological malignancies, and warrant investigation.*

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Questions & Comments
Please call **Neill Kimball**, Managing Editor, at (404) 262-5404.

Source: Castillo JJ, et al. Increased incidence of non-Hodgkin lymphoma and myeloma in patients with diabetes mellitus type 2: A meta-analysis of observational studies. *Blood* 2012; 119:4845-4850.

Although there have been prior reports of an association of certain hematological malignancies with diabetes mellitus, including a meta-analysis from this same group,[1] a clear association has not been definitively established, particularly for certain types of hematologic malignancy. To address this, Castillo and colleagues conducted a second meta-analysis including additional studies published since their prior report. Articles were included in this analysis if they contained original data from epidemiologic observational studies (cohort or case-control) examining potential association between type 2 diabetes mellitus (DM2) and the incidence of lymphoma, leukemia, or myeloma over a minimum follow-up of 3 years. The quality of included studies was determined using the Newcastle-Ottawa Scale.[2] There were 26 studies identified (13 case-control and 13 cohort studies) evaluating the association of DM2 with one or more hematological malignancies. The meta-analysis was performed using standard methodology[3] with random-effect modeling[4] with specific attention to account for publication bias.[5]

Outcome was calculated as odds ratio (OR) for a specific hematological malignancy occurring in patients with DM2. The OR for non-Hodgkin lymphoma (NHL) was increased at 1.22 (95% confidence interval [CI] 1.07-1.39; $P < 0.01$) but the OR for Hodgkin lymphoma was not. There was an increased OR for peripheral T-cell lymphoma (OR 2.42, 95% CI 1.24-4.72; $P = 0.009$) but not for other NHL subtypes. The OR for leukemia was 1.22 (95% CI 1.03-1.44; $P = 0.02$), and the OR for myeloma was 1.22 (95% CI 0.98-1.53; $P = 0.08$).

■ COMMENTARY

Thus, this analysis demonstrated that patients with DM2 have a mild-to-moderate increased risk of developing NHL, particularly peripheral T-cell lymphoma (PTCL), but, curiously, not Hodgkin lymphoma. Furthermore, the odds for developing leukemia were increased, but the power of the study was insufficient to identify whether the risk pertained to acute or chronic, or for that matter lymphoid or myeloid variants. Further, the risk for myeloma was apparent, but did not quite reach a level of statistical significance.

Epidemiologic studies are famous for identifying interesting and potentially important associations. Thus, it appears the presence of type 2 diabetes renders an increased risk for certain hematologic malignancies. The authors point to a joint consensus statement from the American Diabetes Association and the American Cancer Society[6] in which several features of DM2 are mentioned as potential pathways to hematologic malignancy, including inflammation, hyperinsulinemia, increased insulin-like growth factor (IGF), and up-regulation of the IGF-1 receptor. To complicate things, there are a number of factors that are risks for both DM2 and neoplasia (including hematologic malignancy) such as advancing age, obesity, smoking, and alcohol.

Diabetes is very common, especially with advancing age, and with the shifting demographic in the United States and elsewhere, in-depth studies that identify the mechanisms of this association would be of great value, particularly if the causative factors can be modified and the risk for hematological malignancy thereby reduced. ■

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Tanning Beds Revisited

ABSTRACT & COMMENTARY

By William B. Ershler, MD

Dr. Ershler reports no financial relationships relevant to this field of study.

This article originally appeared in the June issue of Clinical Oncology Alert.

Synopsis: *The practice of tanning by artificial means, such as by sunlamps or sunbeds, continues to be popular, particularly in young people despite the acknowledged risk for increased skin cancer. Most data in this regard have been derived from case-control analyses. In the current report from the Nurses Health Study II examining 20-year follow-up of 73,494 nurses, an increased incidence of basal cell, squamous cell, and melanoma was observed in those who reported tanning*

bed use either during high school/college years or from age 25-35 years.

Source: Zhang M, et al. Use of tanning beds and incidence of skin cancer. *J Clin Oncol* 2012;30:1588-1593.

Artificial exposure to ultraviolet light, such as in a tanning salon, has been associated with increased skin cancers. A meta-analysis of 19 studies revealed that ever-use of sunbeds was associated with 15% increased risk of melanoma compared with never having used a sunbed.[1] This analysis revealed a similar increase in squamous cell carcinoma (SCC), but the risk was found to be insignificant for basal cell carcinoma (BCC). Most prior studies have used case-control methodology with only limited data derived from prospective cohorts. The current research was designed to evaluate skin cancer risk in the context of prior tanning bed use by capitalizing on the rich data available in the Nurses Health Study II (NHSII).

The investigators report on 73,494 female nurses who responded by questionnaire every 2 years over a 20-year span (from 1989 to 2009). Embedded in the questionnaires were questions regarding the frequency of use of tanning beds during high school/college years and at ages 25-35 years. Also extracted from the questionnaire was the development of skin cancer (BCC, SCC, or melanoma). The investigators used Cox proportional hazards models and carefully adjusted for host risk factors, ultraviolet index of residence, and sun exposure behaviors at a young age.

During follow-up, 5,506 nurses were diagnosed with BCC, 403 with SCC, and 349 with melanoma. The multivariable-adjusted hazard ratio (HR) of skin cancer for an incremental increase in use of tanning beds of four times per year during both periods was 1.15 ($P \leq 0.001$) for BCC, 1.15 ($P \leq 0.03$) for SCC, and 1.11 ($P \leq 0.13$) for melanoma. Compared with tanning bed use at ages 25 to 35 years, there was a significantly higher risk of BCC for use during high school/college (multivariable-adjusted HR for use more than six times per year compared with no use was 1.73 during high school/college vs. 1.28 at ages 25-35 years; P for heterogeneity ≤ 0.001).

■ COMMENTARY

There has been concern that the common use of such tanning beds among adolescents and young adults, estimated to be 20-40% in these age groups in the United States,[2,3] will result in the increased occurrence of skin cancers later in life. The current data provide strong evidence that this is the case, as it demonstrates a dose-response relationship between tanning bed use and the risk of skin cancers, especially BCC, and the association is stronger for patients with a younger age at exposure.

There is increasing pressure coming from public and private health agencies, such as the National Institutes of Health and the American Cancer Society, for increased restrictions on indoor tanning, particularly as it is marketed for adolescents and young adults. Inasmuch as BCC is the most common form of cancer in the United States and it is clearly associated with substantial quality of life and economic issues, prevention strategies should be paramount. The Zhang report should be high on the reading list of those who concern themselves with public health policy. ■

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ICU Privacy Curtains are Contaminated with Potentially Pathogenic Bacteria

ABSTRACT & COMMENTARY

By David J. Pierson, MD

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Dr. Pierson reports no financial relationships relevant to this field of study. This article originally appeared in the June issue of Critical Care Alert.

Synopsis: *When routinely cultured, essentially all ICU privacy curtains were found to be contaminated with potential pathogens at least some of the time. Recovered organisms included methicillin-resistant staphylococci and vancomycin-resistant enterococci.*

Source: Ohl M, et al. Hospital privacy curtains are frequently and rapidly contaminated with potentially pathogenic bacteria. *Am J Infect Control* 2012; Mar 29. [Epub ahead of print.]

Investigators at the University of Iowa Hospital collected culture samples from vinyl privacy curtains at 30 inpatient locations, half of them in the medical and surgical ICUs. Curtains at each location were sampled twice weekly. Each curtain's leading edge was swabbed vertically for 100 cm, starting 90 cm above the floor, to a depth of 4 cm. Standard culture techniques were used, and methicillin-resistant *Staphylococcus aureus* (MRSA)

and vancomycin-resistant enterococci (VRE) were typed in order to distinguish recontamination from persistence of previous contamination.

Over the 3-week study period, 43 separate curtains were cultured a total of 180 times. In the 30 sites, 13 new curtains were placed during this period. Cultures from 41 of the 43 curtains (95%) demonstrated contamination on at least one occasion. The mean number of colonies resulting from direct plating of the swabs on culture medium was 13.2. Two-thirds of all cultures grew either *S. aureus*, enterococcus species, or a gram-negative species. *S. aureus* was present in 26%, and of these 44% were MRSA; VRE was recovered in 17%. Aerobic gram-negative bacteria grew in 22% of cultures, including two *Klebsiella* isolates with extended-spectrum beta-lactamase phenotype. Two curtains grew MRSA on two separate occasions, in each case of different phenotypes. Of the 18 curtains that grew VRE, eight were positive at more than one time point, seven with different phenotypes over time. Of the 13 new curtains hung during the study period, 12 became contaminated with at least one class of organisms within 1 week.

■ COMMENTARY

The findings of this study are not surprising. Potentially pathogenic organisms have been recovered from patients' gowns, personal effects, bed rails, and television remotes; from their clinicians' ties, white coats, stethoscopes, and cellular phones; from bedside medical equipment of all kinds; and from computer keyboards and monitors in the room. Privacy curtains are touched by patients, visitors, clinicians, and many others, so they could be expected to be contaminated by organisms potentially passing both toward and from the patient. The authors call for additional studies of interventions for reducing bacterial contamination of curtains and the potential for the contaminating organisms to be transferred to patients. While such studies would undoubtedly be helpful, the findings reinforce the need for appropriate hand hygiene and other infection control measures *now* — by everyone both coming and going — when interacting with each patient or that patient's immediate environment. ■

Brief Report

Conjugate Pneumococcal Vaccine and Adults

By Stan Deresinski, MD, FACP, FIDSA

Clinical Professor of Medicine, Stanford University, Associate Chief of Infectious Diseases, Santa Clara Valley Medical Center

Dr. Deresinski does research for the National Institutes of Health, and is an advisory board member and consultant for Merck. This article originally appeared in the July issue of Infectious Disease Alert.

Synopsis: *While Prevnar 13 has received FDA approval for use in adults aged 50 years and older, the CDC recommends continued use of the 23-valent polysaccharide pneumococcal vaccine until further information becomes available.*

Source: CDC. Licensure of 13-valent pneumococcal conjugate vaccine for adults aged 50 years and older. *MMWR Morb Mortal Wkly Rep* 2012;61:394-395.

PREVNAR 13 (PCV13), A 13-VALENT PNEUMOCOCCAL CONJUgate vaccine, which had been available for pediatric use since 2010, was approved at the end of 2011 by the FDA for the prevention of pneumonia and invasive disease caused by serotypes in adults 50 years of age and older. Although not yet recommended by the Advisory Committee on Immunization Practices (ACIP), PCV13 is available for use among adults in this age group.

This approval was not based on a demonstration of protective efficacy but rather on the demonstration of immunogenicity comparable to that observed with the 23-valent pneumococcocal vaccine, Pneumovax 23. Confounding this approach is that, while it is agreed that the latter is protective against invasive pneumococcal disease, a consensus regarding its ability to prevent nonbacteremic pneumococcal pneumonia is lacking. Furthermore, the antibody response that correlates with protection remains unknown. PCV13 serotypes currently account for approximately one third of cases of invasive pneumococcal disease among adults aged 65 years and older. In addition, 11 serotypes that account for 25% of invasive pneumococcal disease cases in adults aged 65 years and older are included in PCV23 but not in PCV13. Thus, there remains a degree of uncertainty regarding the efficacy of PCV13 in adults. However, the ability to prevent pneumococcal pneumonia is currently being evaluated in a trial involving 85,000 individuals aged 65 years and older who had never received PPSV23 in the Netherlands.

The availability of PCV13 for adults 50 years of age and older has raised the question of whether clinicians should switch to its use in place of PCV23, not only in the outpatient setting, but also as part of obligatory vaccination of targeted inpatients. The following is the current recommendation: "ACIP will continue to review evidence as it becomes available to guide development of a recommendation regarding routine use of PCV13 in adults aged 50 years and older. In the meantime, health-care providers should continue to administer PPSV23 in accordance with current recommendations." ■

Mirabegron Extended-Release Tablets (Myrbetriq™)

By William T. Elliott, MD, FACP, and James Chan, PharmD, PhD

Dr. Elliott is Chair, Formulary Committee, Northern California Kaiser Permanente; and Assistant Professor of Medicine, University of California, San Francisco. Dr. Chan is Pharmacy Quality and Outcomes Manager, Kaiser Permanente, Oakland, CA

Drs. Elliott and Chan report no financial relationships relevant to this field of study.

A BETA-3 ADRENERGIC AGONIST HAS BEEN APPROVED FOR the treatment of overactive bladder in adults. Mirabegron differs from other agents approved for this same indication, such as oxybutynin, tolterodine, solifenacin, darifenacin, etc., which are anticholinergic/antimuscarinic agents. Mirabegron is marketed by Astellas Pharma as Myrbetriq.

Indications

Mirabegron is indicated for the treatment of overactive bladder with symptoms of urge urinary incontinence, urgency, and urinary frequency.[1]

Dosage

The recommended dose is one 25 mg tablet, swallowed whole, once daily without regard to meals.[1] Effectiveness should be achieved within 8 weeks. The dose may be increased to 50 mg based on effectiveness and tolerance. The dose should not be increased in patients with severe renal dysfunction or moderate hepatic dysfunction.[1]

Mirabegron is available as 25 mg and 50 mg tablets.

Potential Advantages

Mirabegron is the first in the class of beta-3 adrenergic agonists. It offers a different adverse event profile compared to the antimuscarinic agents (e.g., dry mouth, constipation).

Potential Disadvantages

Mirabegron may increase blood pressure, particularly in those with baseline hypertension.[1] It is also a moderate inhibitor of CYP2D6; therefore monitoring or dose adjustments may be needed if coadministered with drugs with a narrow therapeutic index which are substrates of this isoenzyme (e.g., propafenone, flecainide, thioridazine).[1] Mirabegron may not be effective in males with BPH.[3]

Comments

The involuntary contraction of the detrusor muscle in the bladder results in overactive bladder. The antimuscarinic agents inhibit the contraction of this muscle. Mirabegron's action on the beta-3 adrenergic receptor relaxes the detrusor smooth muscle, which results in improved bladder compliance on filling and increases bladder capacity.[1,2] In general terms, antimuscarinics act on the voiding phase of the micturition while beta-3 adrenergic agonists work on the filling/storage phase of micturition. The safety and efficacy of mirabegron was studied in three, randomized, double-blind, placebo-controlled, 12-week trials (SCORPIO, ARIES, CAPRICORN).[1,3] Overactive bladder was defined as at least eight micturitions/day and at least three episodes of urgency with or without incontinence over a 3-day period for at least a 3-month duration. Adult subjects were randomized to mirabegron 50 mg, 100 mg, and tolterodine ER 4 mg in study 1; 50 mg, 100 mg, and placebo in study 2; and 25 mg, 50 mg, or placebo in study 3. The co-primary endpoints were change from baseline to week 12 in mean number of incontinence episodes/day and change in mean number of micturitions/day. A secondary endpoint was the change from baseline in mean volume voided/micturition.[1] The pooled results for the 50 mg dose (n = 1324) compared to placebo (n = 1328) were a mean reduction of 0.55 micturitions/24 hours from a baseline of 11.7 and 11.6, respectively ($P < 0.001$).[3] Incontinence episodes compared to placebo (n = 862 and 878, respectively) were reduced by a mean of 0.40 incontinence episodes/24 hours from a baseline of 2.7 ($P < 0.001$). Mean volume voided compared to placebo (n = 1324 and 1328, respectively) increased by 11.9 mL from a baseline of 159 mL ($P < 0.001$). The improvements with the 25 mg dose (n = 254) compared to placebo (n = 262) were mean reductions of 0.47 ($P = 0.005$), 0.40 ($P = 0.007$), and 4.6 ($P = 0.15$), respectively. Symptomatic effectiveness was seen within 8 weeks for the 25 mg dose and 4 weeks for the 50 mg dose. The 100 mg dose was not considered for marketing and comparison to tolterodine was not a primary objective.[4] Overall, the 50 mg dose appears to be more effective but the effects are quite modest. Only 4% of study participants achieved a minimally important improvement in the level of urgency with the 25 mg dose and 8.3% with the 50 mg dose, and only the 50 mg dose was statistically different from placebo.[4]

Clinical Implications

Mirabegron offers an agent with a different mechanism of action and adverse reaction profile compared to the antimuscarinic drugs for the treatment of overactive bladder in adults. Overall these agents are modestly effective.[5] Mirabegron appears to no different albeit with a difference adverse reaction profile. ■

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CME Questions

1. **Which of the following is *least* predictive of future vascular events in high-risk patients?**
   a. LDL-C concentration
   b. LDL particle size
   c. HDL-C concentration
   d. Apolipoprotein B

2. **In the recent meta-analysis, type 2 diabetes was found *not* to be associated with increased risk for the development of:**
   a. Hodgkin lymphoma.
   b. non-Hodgkin lymphoma.
   c. peripheral T-cell lymphoma.
   d. leukemia (not otherwise specified).

3. **Data from the Nurses Health Study II indicated an increased risk for which type(s) of skin cancer for those who frequented tanning salons at a young age?**
   a. Squamous cell cancer
   b. Basal cell cancer
   c. Melanoma
   d. All of the above

4. **Which of the following organisms were recovered from patients' privacy curtains in the ICU and other clinical locations in the hospital?**
   a. Methicillin-resistant *Staphylococcus aureus*
   b. Vancomycin-resistant enterocicci
   c. Gram-negative rods with extended-spectrum beta lactamase
   d. All of the above

5. **The proportion of privacy curtains found to be contaminated with bacteria on at least one occasion during the 3-week study period was:**
   a. 35%.
   b. 55%.
   c. 75%.
   d. 85%.
   e. 95%.

CME Objectives

Upon completion of this educational activity, participants should be able to:

- describe new findings in the differential diagnosis and treatment of various diseases;
- describe the advantages, disadvantages and controversies surrounding the latest advances in the diagnosis and treatment of disease;
- identify cost-effective treatment regimens;
- explain the advantages and disadvantages of new disease screening procedures.

CME Instructions

To earn credit for this activity, follow these instructions:

1. Read and study the activity, using the provided references for further research.
2. Log on to www.cmecity.com to take a post-test; tests can be taken after each issue or collectively at the end of the semester. First-time users will have to register on the site using the 8-digit subscriber number printed on their mailing label, invoice or renewal notice.
3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.
4. After successfully completing the last test of the semester, your browser will be automatically directed to the activity evaluation form, which you will submit online.
5. Once the completed evaluation is received, a credit letter will be e-mailed to you instantly. You will no longer have to wait to receive your credit letter! ■

By Louis Kuritzky, MD, Clinical Assistant Professor, University of Florida, Gainesville

Dr. Kuritzky is an advisor for Endo, Kowa, Pricara, and Takeda.

Coffee Might be One Less Thing We Have to Worry About

Source: Freedman ND, et al. *N Engl J Med* 2012;366:1891-1904.

In the United States and Europe, coffee is a staple of diet and social activities for most adults. Increased sympathetic tone — as generated by the autonomic nervous system, hyperthyroidism, cocaine, sympathetic amines, etc. — can be quite toxic. Caffeine also is a stimulant, albeit of short-lived duration. An association of coffee with higher LDL levels has also been noted. Could the commonplace life-long ingestion of coffee be toxic also?

The NIH-AARP Diet and Health Study solicited questionnaires from AARP members 50-71 years of age (n = 617,119) in 1995-96. Usable information for analysis was obtained from 402,263 of these. Many dietary aspects were addressed, but this communication was focused on coffee. Respondents grouped themselves into categories ranging from zero to more than six cups of coffee daily, subgrouped into caffeinated and decaffeinated.

By multivariate analysis (correcting for such confounders as smoking), there was an *inverse* relationship between coffee consumption and mortality for both men and women. For example, men who drank at least six cups of coffee daily had a 10% lower risk of death and women had a 15% lower risk. CV events, diabetes, and infectious disease causes of death were inversely associated with coffee drinking, and it did not appear to make a difference whether coffee was caffeinated or decaffeinated.

Given the observational nature of this trial, it is not possible to establish causation. Hence, while coffee consumption is associated with reduced mortality, we cannot yet say coffee consumption *causes* reduced mortality. Nonetheless, it is reassuring that a dietary habit so widespread among adults appears to be benign, and possibly even beneficial. ■

ED, Lower Urinary Tract Symptoms, and Ejaculatory Dysfunction

Source: Kwa JS, et al. *Int J Impot Res* 2012;24:101-105.

That erectile dysfunction (ED) increases with age is not the least bit surprising. Nor, with but a moment's consideration, is the correlation of age with lower urinary tract symptoms (LUTS) counterintuitive. After all, as men age, the prostate continues to enlarge, and nocturia, frequency, dribbling, difficulty starting/stopping stream commonly ensue. A curious observation within the last decade, however, is that there is an association between the presence of LUTS and ED that is independent of age. That is, at any age, men with LUTS have a higher frequency of ED, and the ED is correlated with the severity of LUTS. A mechanism interconnecting these two otherwise seemingly separate phenomenons has been elusive. However, a hypersensitivity to sympathetic tone has been noted both in ED and LUTS, and may be a central link. The common bond between ED and LUTS is further reflected by the recent approval of PDE5 inhibitors — which had heretofore been considered ED drugs — for management of benign prostatic hyperplasia (BPH).

In the data provided by Kwa et al on 250 mid-life men, it was again found that ED and LUTS increase with age. What they also note is that ejaculatory dysfunction (EjD) — which includes premature ejaculation, anejaculation, dry ejaculation, and decreased ejaculatory volume — also increases with age, although premature ejaculation alone was not associated with age.

EjD, ED, and LUTS have interrelatedness that is closely linked with age, but there may be other pathophysiologic correlates among them. ■

The Allure of Shared Medical Appointments in Diabetes Care

Sources: Ridge T. *Diabetes Spectrum* 2012;25:72-75. Miselli V, et al. *Diabetes Spectrum* 2012;25:79-84.

Two articles in the spring edition of the journal *Diabetes Spectrum* touch on the concept of shared medical appointments (e.g., group visits) to enhance management of type 2 diabetes. The appeal of group visits stems from several sources. First, in a busy clinical environment, the ability to share fundamental management concepts with multiple patients at the same time seems much more efficient. Second, group bonding and sharing experiences may foster team efforts that enhance knowledge, confidence, self-efficacy, and possibly even outcomes. The literature on this topic is generally favorable. The review article by Ridge describes various reports suggesting improved quality of life, knowledge, and (sometimes) diabetes control in persons who participate in group visits when compared with "usual care."

Miselli et al provide the details of their structured Group Care Model and the results of a 4-year study of their model. Patients with type 2 diabetes were randomized into group care or usual care. At the end of 4 years, BMI, fasting glycemia, A1c, total cholesterol, and blood pressure had improved in the group care cohort, whereas they had either stayed the same or worsened in the control group. Similarly, quality of life, diabetes knowledge, and healthy behaviors improved comparatively in the group care subjects.

The idea of group visits is not new, but it has been slow to take hold in clinical settings in the United States. The group visit model may make sense both from an economic and health outcomes perspective. ■