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INSIDE

Hot Flashes? Try Aspirin. It Probably Won't Help the Hot Flashes, but May Reduce the Risk of Breast Cancer

ABSTRACT & COMMENTARY

Synopsis: *Regular use of aspirin and other nonsteroidal anti-inflammatory agents (NSAIDs) may reduce the risk of breast cancer.*

Source: Terry MB, at al. *JAMA*. 2004;291:2433-2440.

Terry and colleagues hypothesized that aspirin and other non-steroidal anti-inflammatory agents (NSAIDs) protect against breast cancer by inhibiting production of estrogen and or progesterone; thus, the reduction in breast cancer risk associated with NSAID use would be greater for estrogen and progesterone receptor positive breast cancers. To address these issues, they undertook a population-based, case-control study of English-speaking New York women with breast cancer. This cohort has been previously described.[1] In brief, it consists of mostly white women between the ages of 20 and 80 who are well characterized, including information about many lifestyle factors and all known risk factors for breast cancer. The current report includes 1141 cases and 1075 aged-matched controls. NSAID use was determined both by a questionnaire and by a structured interview that focused on the 12 months prior to diagnosis of breast cancer. "Regular use" of NSAIDs was defined as use at least 4 times per week for at least 3 months, initiated at least a year prior to diagnosis. "Ever use" was defined as at least once per week for 6 months or longer. There was no attempt to estimate dose. Participants were asked about aspirin, ibuprofen, and acetaminophen (acetaminophen was a control variable). In their analysis, Terry et al controlled for many variables (including things that I didn't even know had any relationship to the risk of breast cancer).

In this study, 20.9% of breast cancer patients and 24.3 % of controls reported "ever use" of aspirin, (defined as at least once per week for 6 months or longer). This was a statistically

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significant difference (OR, 0.8; CI, 0.66-0.97), but when broken down by in situ vs invasive cancers, was statistically significant only for the invasive cancers. The protective effect of aspirin was significant both for premenopausal and for postmenopausal women. Fewer women reported ever use of ibuprofen or of acetaminophen, and neither of these was associated with a reduced risk of breast cancer. There did appear to be a "dose-dependent" relationship between frequency of aspirin use and reduced risk of breast cancer, with greater reduction in risk for more frequent use (but not for longer use). The reduction in risk was greater for "regular use" (as opposed to "ever use," OR, 0.74; CI, 0.59-0.92). The protective effect of aspirin against breast cancer was statistically significant for every receptor category except *both* estrogen and progesterone negative tumors, and this was most pronounced among post-menopausal women.

COMMENT BY BARBARA A. PHILLIPS, MD, MSPH

Although this paper and the accompanying editorial[2] briefly review a fairly large body of literature that demonstrates reduction in breast cancer with NSAID use, I must confess that this is news to me. And it may well be news to your patients; this article received a lot of attention in the lay press. What is new about this paper is the demonstration that the protective effect of aspirin is strongest against hormone receptor positive tumors. The putative basis for this effect is blocking cyclooxygenase (COX), which catalyze the synthesis of prostaglandins, which increase the production of both estrogen and progesterone, which are known to promote the development of breast cancer.

So now, in addition to reducing the risk of cardiovascular disease[3] and colorectal cancer,[4] aspirin use may also reduce the risk of hormone receptor positive breast cancer (the most common cancer in nonsmoking women). And it doesn't take very much, since there was a reduction with use 4 times a week for 3 or more months, or even with once a week for 6 months of longer. As is often the case with important work, this article raises many questions. Would there be an even greater reduction in risk with more intense aspirin use? Does timing of use within a woman's lifespan matter? What is the optimum dosage?

While awaiting answers to these and other questions, it is not unreasonable to encourage regular use of this amazing drug (aspirin) in nonsensitive patients. I am taking it myself! ■

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Cancer Screening for Older Women: The Importance of Health Status

ABSTRACT & COMMENTARY

Synopsis: *Cancer screening for older women remains an area of active investigation. One current recommendation is to perform screening for individuals with a life expectancy of 5 years or more, as early detection of tumor in these individuals is more likely to have an impact on survival. In this cross-sectional population based study from California, it is apparent that screening is currently applied to older women without consideration of health status. Thus, for many, mammography and Pap smears are being obtained with little hope of benefit.*

Source: Walter LC, et al. *Ann Intern Med*. 2004;140: 681-688.

In general, the rates of screening mammography and Papanicolaou (Pap) smears decrease with advancing age. However, the benefit of these cancer-screening tests is better predicted by health status than age alone. It is improbable that older women whose life expectancy is less than 5 years would benefit from screening mammography and Pap smears.[1,2] Previous studies examining associations between health status and recent receipt of cancer screening tests have been inconsistent. As a result, it is currently unclear to what extent screening mammography and Pap smears are actually targeted to healthy older women who may plausibly benefit from these tests and are avoided in older women with limited life expectancies and for whom the potential harms (additional diagnostic tests, surgery, etc) may outweigh the benefits. To examine this question, Walter and colleagues from San Francisco Veterans Affairs Medical Center and University of California, San Francisco conducted a cross-sectional population-based study using data from the 2001 California Health Interview Survey (CHIS). In this survey, 4792 women 70 years of age or older were separated into 4 distinct categories based on health status and were analyzed for the receipt of screening mammography within the previous two years and a screening Pap smear within 3 years. Health Status was assessed by using the Medical Outcomes Study 12-item Short Form Physical Summary Scale.

Overall, 78% of women included in the study reported receiving screening mammography within 2 years of the survey and 77% reported a recent Pap smear. In general, screening rates decreased with advancing age. For those 70-74 years of age, 88% reported screening mammography and 86% reported a screening Pap smear. In comparison, for those 85 years of age or older, 61% reported screening mammography and 60% reported a screening Pap smear. However, within each age category, the percentage of women who were screened did not significantly decrease with worsening health status ($P >$ 0.1 for all comparisons). Women 75 to 79 years of age in the worst health status category were more likely to receive a screening mammogram than women 80-84 years of age in the healthiest PCS-12 quartile (82% vs 66%; $P = 0.002$), despite life expectancy. In addition, except for women 85 years or older, those with the worst PCS-12 quartile reported the same or more screening Pap smears than those women in the best PCS-12 quartile. Greater than 50% of women 80 years or older and in the worse health quartile reported recent screening mammography or Pap smears, corresponding to approximately 81,000 mammograms and 35,000 Pap smears when extrapolating these data to the California population. In contrast, an estimated 97,000 women 70 to 84 years of age in the best two health status quartiles had not recently received screening mammography (95% CI, 85,000-109, 000) and 58,000 had not received a recent pap smear.

COMMENT BY WILLIAM B. ERSHLER, MD

The current report indicates that physicians are not determining candidates for screening based upon health status. The incidence of breast cancer increases with advancing age and accordingly, mammography is more likely to reveal previously unrecognized lesions in older women. However, the impact of early detection might be of little consequence to individuals of limited life expectancy because of other comorbidities. This is the foundation for the recommendation to limit screening to individuals with a life expectancy of 5 years or more. In the current survey, it was encouraging to see a relatively high rate of screening in older women. However, it appears that a good deal of the screening is inappropriately prescribed. Physicians and other health care providers who prescribe screening should take note. It is health status and life expectancy that are determinants of who among geriatric patients might benefit from screening. If estimated survival is 5 years or more, screening is appropriate. ■

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

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Do Seizures in Older Adults Predict Stroke Risk?

ABSTRACTS & COMMENTARY

Synopsis: Seizures should be a red flag to consider treatment to modify stroke risk.

Sources: Cleary P, et al. *Lancet.* 2004;363:1184-86; Sudlow, CM. *Lancet*. 2004;363:1175-1176.

USING DATA FROM THE UK GENERAL PRACTICE Research Database (GPRD), Cleary and associates evaluated the hypothesis that late-onset (60-year-old subjects and older) seizures increase the risk of subsequent stroke. The 4709 subjects (with no prior history of cerebrovascular disease, other brain injury, brain tumor, alcohol, or drug abuse, or dementia) were compared to 4709 age- and gender-matched seizure-free individuals from the same database. There was a highly significant ($P < 0.0001$) difference in subsequent stroke-free survival in seizure patients vs controls. By Cox's model, the relative risk of stroke was 2.89 (95% confidence interval, 2.45-3.41).

In an accompanying editorial, Sudlow suggests that "it seems reasonable for general practitioners, general physicians, geriatricians, and neurologists . . . to assess their patients' vascular risk factors, and to consider treatment to prevent stroke (and other vascular disease)."

COMMENT BY ANDY DEAN, MD

There are limitations to the present study, which go to the heart of the association of new-onset seizures and subsequent stroke risk. The main question is whether seizures are a true marker for stroke or an epiphenomenon. Seizures in older adults are more likely to be symptomatic than in younger individuals, with idiopathic and cryptogenic epilepsy being more common in the latter. We suspect that the GPRD does not capture important data to solidify the claim that seizures are an independent predictor of stroke risk. First, while a prior history of cerebrovascular disease was an exclusion criterion for the study group, there is no indication whether this exclusion was rigorously defined by neuroimaging in addition to clinical history and examination. Second, it is unlikely that the evaluation of the patients' new-onset seizures included diffusion-weighted imaging (to exclude ischemic stroke) or echo gradient MRI sequences (to exclude subtle focal cortical hemorrhage). Without these data, one is left to wonder whether many late-onset seizures are due to existing cerebrovascular disease. If so the conclusion of the study is not particularly novel: previous stroke predicts subsequent stroke.

Even if seizures in older individuals are not an independent marker of cerebrovascular disease, we agree with the investigators that these seizures should be a red flag to consider treatment to modify stroke risk (be it primary or secondary prevention). ■

Dr. Dean is Assistant Professor of Neurology and Neuroscience; Director of the Epilesy Monitoring Unit, Department of Neurology, New York Presbyterian Hospital, Cornell Campus, New York, New York.

Risk of Hepatitis A in Travelers to Developing Countries

Brief by Carol A. Kemper, MD, FACP

Source: Teitelbaum P. *J Travel Med.* 2004;11:102-106.

ABOUT 4-28% OF CASES OF HEPATITIS A OCCUR IN travelers. This estimated risk has let to recommendations for hepatitis A vaccination (HAV). Teitelbaum assessed the annual incidence of acute HAV infection in Canadian travelers from 1996 to 2001. During that time, Canadians logged ~36 million days/year of travel to developing countries with an average incidence of HAV infection of 6.15 per 100,000 people. Based on these data, ~1 in 3000 travelers are at risk for HAV infection if they spent 1 month traveling in a developing country—considered the usual duration of such travel. Obviously this risk may vary, depending on the types of activity and the country visited. Extrapolating from these figures (based on USD figures for HAV vaccine), about $360,000 of vaccine would be administered to prevent a single HAV infection in travelers to developing countries. I bet the Canadian Health Care System is trying to decide if the expense is worth it. ■

Dr. Kemper is Clinical Associate Professor of Medicine, Stanford University, Division of Infectious Diseases; Santa Clara Valley Medical Center, Santa Clara, Calif.

The Forgotten Art and Science of Hand Hygiene

ABSTRACT & COMMENTARY

Synopsis: *This concise review makes a compelling case for a change in the healthcare worker's behavior. Helpful hints including increasing the use of alcohol-based formulations to reduce the time constrains are provided throughout the article.*

Source: Trampuz A, et al. Mayo Clin Proc. 2004;79: 109-116.

Nosocomial infections have become the Achilles heel for the healthcare industry. Numerous scientific and lay public articles cite the increasing frequency of nosocomial infections. The problem and the solution, however, have been known for a long time. As Trampuz and colleagues review in the article, Semmelweis proposed more than 150 years ago that the results of hospital care (in that case, a maternity ward) could be dramatically improved by using careful hand washing with a 4% solution of chlorinated lime. The microbiology of skin flora was not well defined at that time. It is now known that there are normal resident flora, a group of organisms (coagulase-negative staphylococci, corynebacteria, etc) that colonize the deeper layers of skin. These organisms are hard to get rid of by hand washing, but they prevent colonization of deeper tissues by more virulent or pathogenic microorganisms. Transient flora, a group of organisms that colonize more superficial layers of skin, are responsible for most health care related infections and the spread of antimicrobial resistance. This group includes organisms such as *Staphylococcus aureus*, Gram-negative bacilli and *Candida* species amongst them.

There are 2 different methods for hand hygiene. In the traditional method, hands should be washed thoroughly with soap and water for at least one minute, and a disposable towel should be used to dry hands and perhaps to close the faucet. With mechanical friction, microorganisms are removed from the skin and hair follicles. It is now thought that such careful hand washing is essential only when hands are soiled with body fluids. In general, it takes approximately 2 minutes to complete such a hand-washing task. It is estimated that if good hand washing is performed for 3 episodes per hour, nurses may have to spend about one fifth of their time washing hands during an 8-hour shift.

The emerging alternative is alcohol-based hand rubbing solutions and gels. The use of alcohol-based hand rubs is being recommended in most other circumstances in which hand hygiene is required. Alcohol has bactericidal properties that most hand washing soaps do not have. A much shorter time is needed to achieve a significant reduction in bacterial colony counts when using alcohol based hand rubs. These products also have some important virucidal activity. Also, alcohol-based hand rubs can be used while traveling between the points of contact with the patient to other areas of work, or even while traveling to the next patient.

The use of powder-free gloves reduces the need for hand washing; however, it does not obviate the need for hand hygiene. Alcohol-based hand rubs should be used after removing gloves. Needless to say, a new pair of gloves should be used for each patient contact. Trampuz et al suggest that alcohol-based hand rubs are also easier on hands than repeated washing with soap and water. Alcohol rubs should be stored away from high temperatures. At present, it is thought that the emergence of microbial resistance is less likely against alcohol-based formulations. It is important to remember that alcohol based hand rubs are to be used only when direct contamination of hands with body fluids has not occurred. The risk of wearing rings and artificial fingernails, which may act as harbingers of bacterial contamination, is highlighted in the article. Based on the available scientific evidence, Trampuz et al suggest that alcohol-based hand rubs should be used liberally and regularly to reduce nosocomial infections.

COMMENT BY UDAY B. NANAVATY, MD

Good hand hygiene by health care personnel is vital to reduce nosocomial infection rates. Maintaining good hand hygiene is a moral duty as well. Unfortunately, routine compliance rates with good hand hygiene are ridiculously low. Most studies suggest that hand hygiene compliance rates in hospital settings are between 20 to 40%. Hospital and system wide projects including education and surveillance by camera and other electronic devices improve compliance rates. Unfortunately, even with these expensive interventions, compliance rates approach only about 70% at best. Imagine if restaurant workers had hand hygiene rates of 40% or less! The country would be reeling with gastro-intestinal morbidity and the food industry would be out of business. Before the bugs on our hands get us out of our business, it is important that we get rid of them, as best and as frequently as possible. ■

Dr. Nanavaty is a Doctor of Pulmonary and Critical Care Medicine, National Institute of Health, Rockville, Maryland.

Pharmacology Update

Insulin Glulisine (Apidra)

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

THE FDA HAS APPROVED ANOTHER RAPID-ACTING insulin to cover mealtime blood sugar spikes. Insulin glulisine is a recombinant DNA human insulin analogue similar to insulin lispro. It will be marketed by Aventis as Apidra™.

Indication

Insulin glulisine is indicated for the treatment of adult patients with diabetes mellitus for the control hyperglycemia.[1]

Dosage

Insulin glulisine is given subcutaneously or by an external infusion pump and should be given within 15 minutes before a meal or within 20 minutes after starting a meal. It generally used with a long-acting insulin.[1]

Insulin glulisine is supplied as 10 mL vials (100 units/mL).

Potential Advantages

Like other rapid acting insulins, insulin glulisine has a more rapid onset of action and shorter duration of action than regular human insulin.

Potential Disadvantages

Potential systemic reactions were reported in 4.3% (79/1833) of participants in controlled clinical trials. This compares to 3.8% (58/1524) who received comparator short-acting insulins.[1] The long-term effect of insulin analogs is not known as modifications may alter affinity for (insulin growth factor) IGF-1 receptor more than for insulin receptors.[3] This may lead to enhanced mitogenic activity.

Comments

Insulin glulisine is the third rapid-acting insulin to market in this country. It is produced by recombinant DNA technology and differs from human insulin at position B3 of the B-chain where aspargine is replaced by lysine and at B29 where lysine is replaced by glutamate. Other marketed rapid-acting insulin are insulin lispro where the amino acids in positions B28 and B29 are switched and insulin aspart where proline (B28) is replaced by aspartate. The pharmacokinetic and pharmacodynamic profiles of insulin glulisine appear to be very similar to that of insulin lispro.[2] In 26-week studies in type 1 diabetics (n = 672) and type 2 diabetics (n = 876) glycemic control (ie, HbA1c) and rates of hypoglycemia requiring intervention from a third party were also comparable.[1] The cost of insulin glulisine was not available at the time of this review.

Clinical Implications

Insulin glulisine adds another rapid-acting insulin to the markets. Given the higher cost, comparable glycemic control, and yet to be determined long term safety due to potential altered receptor binding of rapid-acting insulins, regular human insulin should still be considered for initial therapy. ■

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3. Rakatzi I, et al. *Diabetes*. 2003;52:2227-3228.

CME Questions

1. **Regarding the use of aspirin and breast cancer risk, women who take aspirin:**
   a. have a reduced risk of in situ breast cancer only.
   b. have a reduced risk only of estrogen- and progesterone- receptor negative breast cancer.
   c. have an equally reduced risk of breast cancer whether pre or post menopausal.
   d. have a greater reduction in risk with more frequent use of aspirin.
   e. have a reduction in risk with use of acetaminophen that is equal to that of use of aspirin.

2. **With the goal of reducing nosocomial infection rate in mind, good hand washing is required. All the following are true about hand washing *except*?**
   a. Good hand washing can be accomplished in 20 seconds with use of bactericidal soaps.
   b. Good hand washing should be followed by drying of hands with disposable towels.
   c. Good hand washing works mostly by the mechanical removal of organisms.
   d. Good hand washing would require at least one minute of hand washing.
   e. All of the above

Answers: 1(d); 2 (a)

By Louis Kuritzky, MD

Short-term Intensive Insulin Therapy in Newly Diagnosed DM2

The best initial treatment for the newly diagnosed type 2 diabetic (DM2) remains a matter of debate. Although there is consensus that DM2 is characterized by both insulin secretory and insulin responsivity defects, and that hyperglycemia may contribute to both (so-called 'glucotoxicity'), it is unclear whether intensive early treatment, with a goal of prompt eradication of glucotoxicity, results in any long-term benefits. Since insulin is capable of providing the most rapid, consistent, and substantial declines in glucose, it was a logical choice for studying this issue.

Newly diagnosed DM2 patients (n = 16) were instructed in appropriate use of short-acting insulin before each meal (5 u regular, starting dose), and intermediate acting insulin at bedtime (10-15 u NPH at HS, starting dose). Insulin doses were increased 2-5 u per dose on a daily basis until postprandial and fasting goals were achieved. Clinic visits occurred twice weekly during the first 2-3 weeks until goals were achieved. After 3 weeks insulin was discontinued, and patients were seen monthly (with phone contact every 2 weeks) for one year.

At 1 year, 7 of the subjects were able to maintain glucose control on diet alone, the remaining subjects requiring oral hypoglycemic agents (n = 8) or insulin (n = 1) to maintain control. The subjects who were characterized as requiring less insulin to achieve goals (0.37 u/kg/d vs 0.73 u/kg/d), and attaining a lower fasting glucose (5.9 vs 7.7 mmol/L) during the 3 week intensive insulin program were shown to be able to best sustain control with diet alone. These data support the concept that brisk resolution of glucose toxicity provides some potentially sustained restoration of beta-cell function and/or insulin responsivity. ■

Ryan EA, et al. Diabetes Care. 2004; 27:1028-1032.

Endothelial Dysfunction and Risk of Type 2 Diabetes Mellitus

The primary cause of mortality in type 2 diabetes (DM2) is cardiovascular disease (CVD). Indeed, our most recent national guidelines have recognized that at the point of diagnosis, a person with DM2 has a similar or greater risk of subsequent coronary heart disease (CHD) end point as a person who has already suffered a myocardial infarction. The prominent CVD risk seen in DM2 has been variously, but somewhat unconvincingly ascribed to such risk factors as insulin resistance and hyperinsulinemia. In an effort to better elucidate the pathophysiologic underpinnings of DM2-related CVD, Meigs and colleagues studied plasma biomarkers of endothelial dysfunction in ostensibly healthy women at the time of enrollment into the Nurses Health Study (n = 32,826) in 1989-1990. Biomarkers measured included E-selectin, intercellular adhesion molecule 1 (ICAM-1), and vascular cell adhesion molecule 1.

By the year 2000, 737 women had developed DM2. Baseline biomarkers in these women, when compared to an equal number of controls, showed that E-selectin, ICAM-1, and VCAM-1 each were predictive of future DM2 development. Even after adjustment for BMI, family history, diet, alcohol, and activity level, the likelihood of developing DM2 was increased more than 5-fold in the highest baseline quintile of E-selectin, and approximately 4-fold for the top quintile of ICAM-1.

Endothelial dysfunction presages DM2, and helps explain the disproportionate burden of CVD in this population ■

Meigs JB, et al. JAMA. 2004;291: 1978-1986.

Treatment of Parkinson's Disease with Pergolide and Relation to Restrictive Valvular Heart Disease

Even medications that are generally considered safe and effective may cause adverse effects that are sufficiently uncommon that they escape adequate identification. Although valvular heart disease (VHD) has been described as potentially associated with pergolide treatment, initial estimates suggested a very low frequency (one in 20,000). To provide a better estimate of the VHD risk with pergolide treatment, 78 pergolide-treated Parkinson's disease patients were compared with a population of Parkinsonian subjects who had not received an ergot-derived dopamine agonist. All subjects underwent transthoracic echocardiography. The echocardiographic measurement used to define restrictive VHD was 'tenting distance and area.'

Even when restricting analysis to only those with major suspicion of VHD on echocardiography, almost 20% of pergolide-treated patients manifest some degree of disease. Frequency of VHD correlated both with dose-intensity, and cumulative dose of pergolide.

This frequency of here-to-fore little-recognized valvulopathy associated with pergolide should stimulate clinicians to investigate for VHD in appropriately symptomatic individuals. Indeed, a case can be made for consideration of routine echocardiography in recipients of pergolide. The frequency of VHD detected in this study is similar to the valvulopathy rate seen amongst women who utilized appetite suppressants such as dexfenfluramine (Redux). ■

Van Camp G, et al. Lancet. 2004;363:1179-1183.

A History of "Falling Out"

By Ken Grauer, MD

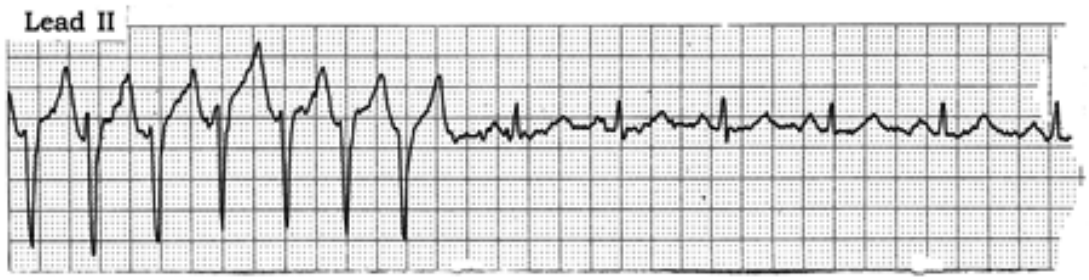

Figure: Rhythm strip recorded on telemetry from a 70-year-old woman admitted to the hospital for episodes of "falling out."

The rhythm in the Figure was obtained from a 70-year-old woman who was admitted to the hospital with a history of "falling out" on several occasions during the week prior to admission. Her initial 12-lead ECG was unremarkable, and acute serum markers were negative for recent infarction. Telemetry monitoring was described as "unremarkable" except for the tracing shown in the Figure. This rhythm strip was interpreted as sinus rhythm with a brief run of "SVT." Your thoughts on the case?

Interpretation: It is difficult to determine from the history provided what may have occurred. The patient's description of "falling out" on several occasions during the week prior to admission could represent a variety of benign phenomena, or could reflect true syncope from a recurrent and serious cardiac arrhythmia. Potentially life-threatening arrhythmias may occur without associated acute infarction and on an infrequent, intermittent basis. Documentation by telemetry monitoring in such cases may be unrevealing since no abnormalities may be seen over an extended period of time. This could be what is happening for this patient.

In view of the history given for this case, the rhythm strip shown in the Figure is worrisome. Baseline artifact is present, accounting for undulation in the baseline that distorts ST segments and alters P wave morphology. Nevertheless, it seems clear that the underlying rhythm is sinus, as evidenced by regular occurrence of narrow QRS complexes at a rate of 80/minute for the last 6 beats on the tracing. Each of these beats is preceded by an upright P wave, albeit the artifact slightly changes P wave appearance. The QRS complex looks very different for the first 7 beats on the tracing. Although the rS complex for these 7 beats does not appear to be widened, one cannot be sure where the QRS begins and ends from this single monitoring lead. The rhythm is fairly regular at a rate of about 150/minute, and no definite atrial activity is seen. This rhythm has to be assumed to be VT (ventricular tachycardia) until proven otherwise. Unfortunately, the beginning of the run of abnormal beats is cut off, such that one has no idea of the duration of the episode. Further evaluation of the tachycardia (ie, thyroid function studies, serum electrolytes, oxygenation status, history of potentially causative drugs, etc) is warranted. If no obvious precipitating cause is found however, the occurrence of the arrhythmia seen here in a patient with a history of "falling out" may warrant electrophysiologic study with consideration of an ICD (implantable cardioverter-defibrillator). ■

In Future Issues: Glucose Metabolism and Coronary Heart Disease