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Doctor, Wash Your Hands!

ABSTRACT & COMMENTARY

Synopsis: *In 2834 observed patient care situations in which handwashing was indicated, the latter took place in only 48%. Noncompliance with handwashing was more frequent in intensive care units and among physicians as compared to other healthcare workers.*

Source: Pittet D, et al. *Ann Intern Med* 1999;130:126-130.

In this observational study in a large teaching hospital, trained infection-control nurses recorded potential opportunities for and actual performance of handwashing during 20-minute observation periods spaced randomly during all shifts over a period of 14 days. Observations were made in a sample of 48 wards, including intensive care units, that comprised 70% of the hospital's 1382 beds. Opportunities for handwashing were defined as all situations in which it was indicated according to published guidelines. Personnel were not aware of which aspects of handwashing were being studied, and no feedback was given during the data collection.

In 2834 opportunities for handwashing, average com-pliance among all healthcare workers was 48%. Compli-ance with handwashing in the 450 opportunities in intensive care units was 36% (odds ratio for noncompliance compared to internal medicine units, 2.0, with 95% CI 1.3-3.1). As a group, physicians washed their hands least often of the types of healthcare workers studied: with the odds ratio for noncompliance among nurses taken as 1.0, that for physicians was 2.8 (95% CI, 1.9-4.1) by multivariate analysis, while that for nursing assistants was 1.3 (95% CI, 1.0-1.6). The odds ratio for noncompliance among other healthcare workers was intermediate between those of physicians and nurses.

COMMENT BY DAVID J. PIERSON, MD, FACP

In this study from Geneva, Switzerland, handwashing was considered to be indicated before and after patient contact; whenever there had been contact with body fluids, broken skin, or other potential sources of microorganisms; and after removing gloves. These criteria are consistent with those in most American hospitals,

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and the fact that handwashing occurred on average less than half the time when it was indicated is discouraging. Other studies have documented the low overall rate of handwashing in hospitals, particularly in intensive care units. In addition, this is not the first study to show that physicians perform less well in this respect than do nurses and other healthcare workers. In this time of increasing emergence of bacterial pathogens resistant to multiple antimicrobials, we need to emphasize the importance of handwashing, probably the most important single factor in the nosocomial transmis-sion of such organisms. Doctor (and nurse, respiratory therapist, anyone involved in patient care)—wash your hands! (*Dr. Pierson is Professor of Medicine, University of Washington, Medical Director, Respiratory Care, Harborview Medical Center, Seattle.*) ❖

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SSRIs, Sex, and Viagra

ABSTRACT & COMMENTARY

Synopsis: *Ashton and Bennett report the successful use of sildenafil (Viagra) to treat two men with sexual dysfunction secondary to the use of selective serotonin reuptake inhibitors (SSRIs).*

Source: Ashton AK, Bennett RG. *J Clin Psychiatry* 1999; 60(3):194-195.

Because sildenafil (viagra) is indicated for the treatment of male sexual erectile dysfunction of various etiologies, Ashton and Bennett initiated sildenafil in two men with sexual dysfunction secondary to the use of selective serotonin reuptake inhibitor antidepressants. Their first patient was a 20-year-old male with major depression, obsessive compulsive disorder, and panic disorder who had achieved a good response to fluoxetine (Prozac) after failing several other treatments. Without prior sexual dysfunction, he developed erectile dysfunction and anorgasmia in association with fluoxetine treatment. The addition of bupropion (Wellbutrin) at a dose of 300 mg/d was ineffective (the addition of bupropion is one of the more common strategies used to attenuate SSRI-induced sexual dysfunction). Subsequent treatment with sildenafil 100 mg prior to sexual activity was highly effective. Side effects were those typically seen with sildenafil monotherapy. Their second patient was a 46-year-old man with major depression and attention deficit disorder who was well controlled on sertraline (Zoloft) and methylphenidate (Ritalin). This gentleman also failed to respond to other antidepressants, but experienced erectile dysfunction and delayed ejaculation in association with sertraline. The addition of bupropion 100 mg/d was ineffective. The addition of sildenafil 50 mg prior to sexual activity improved both erectile function and delayed ejaculation, without side effects.

COMMENT BY LAUREN B. MARANGELL, MD

The incidence of sexual dysfunction with SSRIs may be as high as 50%. The simplest solution is to use the lowest effective SSRI dose, but in many patients the lowest effective dose also causes some degree of decreased libido, delayed ejaculation, or anorgasmia. A variety of antidotes have been used with modest success, although controlled data are lacking for most. In some cases the addition of bupropion (Wellbutrin), which has more dopaminergic effects, may help increase libido. The usual augmenting dose is bupropion SR 150 mg each

morning. Other agents with dopaminergic effects, such as amantadine or psychostimulants, may also be of some benefit. The addition of daily buspirone (BuSpar) in doses of at least 30 mg/d may also be helpful, particularly for patients who also have residual anxiety. Cyproheptadine (Periactin) has been used in doses of 4-8 mg prior to sexual activity, but resulting sedation is problematic. Although it is reasonable to be hesitant about initiating treatment based on only a few cases, SSRI-induced sexual dysfunction is a significant problem, especially since many patients require long-term treatment. Novel approaches are necessary because treatments to date are only modestly effective. In this context, the use of sildenafil appears reasonable, providing that routine precautions are taken, such as not prescribing in patients who are taking nitrates. Although sildenafil has not been systematically studied in women, some clinicians are beginning to use this medication to treat women with SSRI-induced sexual dysfunction with some success. Use in women should include proper documentation that the patient was advised that this use is off-label and that there are minimal data in women at this time. Finally, antidepressants less likely to cause treatment-emergent sexual dysfunction are nefazodone (Serzone), bupropion (Wellbutrin), and mirtazepine (Remeron). (*Dr. Marangell is Director, Clinical Psychopharmacology, Moods Disorders Research, Assistant Professor of Psychiatry, Baylor College of Medicine, Houston, Texas.*) ❖

Prospective Evaluation of the Ottawa Ankle Rules in a University Sports Medicine Center

ABSTRACT & COMMENTARY

Synopsis: *Use of the Ottawa Ankle Rules could limit the need for x-rays in patients without increasing the risk of missing a significant ankle injury.*

Source: Leddy JJ, et al. *Am J Sports Med* 1998; 26(2):158-165.

In an attempt to develop a clinical decision rule to screen emergency room patients, Stiell and colleagues developed a set of clinical evaluation guidelines for patients who present with an acute ankle injury.[1] Using their "Ottawa Ankle Rules," they were able to limit the frequency of x-rays taken in the emergency department without increasing the risk of missing a significant ankle injury. The current study was designed to evaluate the effectiveness of the Ottawa Ankle Rules in a university sports medicine center, where the predicted incidence of a clinically significant fracture is lower (about 8%) than in an emergency department (where it is 13-20%). Leddy and colleagues evaluated all persons (children and adults) who presented to their office with an acute ankle or midfoot injury. The only individuals excluded were those with injuries more than 10 days old, an obviously deformed ankle or foot, or altered sensorium, or an individual who returned for a second evaluation for the same injury.

The evaluating physicians were instructed in the use of the Ottawa Ankle Rules, which require radiography of the ankle if, and only if, there is bony tenderness along the last 6 cm of the posterior aspect of the medial or lateral malleolus or tenderness to palpation over the base of the fifth metatarsal or over the tarsal navicular, or if there is inability to bear weight both immediately after injury and during the examination (4 steps, regardless of limping). When none of these signs is present, x-rays are not obtained. When any one sign was present, x-rays were taken.

Two hundred ten patients were enrolled in the study. Eleven clinically significant fractures (8.3%) were identified. Application of the Ottawa Ankle Rules was 100% sensitive in identifying these significant ankle fractures, and Leddy et al conclude that use of the Ottawa Ankle Rules could significantly reduce the need for radiography in patients with acute ankle and midfoot injuries in this setting (ambulatory sports medicine clinic) without missing clinically significant fractures.

COMMENT BY JAMES D. HECKMAN, MD

Ankle injuries are the most common reason for lost time from participation in athletic activities. In a busy practice, a clinical decision rule that can be applied with 100% sensitivity can be used to improve the cost-effectiveness of the practice. Leddy et al in this study and in the emergency room studies previously reported have found the rules both easy to use and valid. They are a cost-effective screening tool that can be used to identify those ankle injuries that are not associated with a significant fracture and, thus, can be treated effectively with rest, ice, compression, and elevation. In this series of 210 patients, Leddy et al were able to forego ankle x-rays in 34% of the patients who presented with an acute injury without missing any clinically significant fractures. It should be pointed out that these rules should be applied only to acute injuries

(those < 10 days old) and, thus, do not apply to chronic or repeat ankle injuries. The patients must be able to comply and so must be alert and cooperative with the examination. One of the critical phases of the evaluation is a weight-bearing test. Leddy et al found that while many patients were reluctant to try to put weight on the affected ankle, with some gentle encouragement they were often able to do so. Clinical decision rules, such as the Ottawa Ankle Rules, can facilitate our medical decision-making and can conserve important resources without compromising the care of our patient athletes. (*Dr. Heckman is Professor and Chairman, Department of Orthopaedics, University of Texas Health Science Center, San Antonio, Texas.*) ❖

Reference

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The Miss Rate of Lung Cancer in Chest Radiograph Interpretation and its Effect on Stage of Disease

ABSTRACT & COMMENTARY

Synopsis: *A Netherlands study has found that about 19% of patients with lung cancer had the diagnosis missed on the original chest radiograph on which it could be seen in retrospect after the diagnosis was established at a later time. In 57% of the cases, the delay in diagnosis did not influence stage of disease. In 43%, tumors that had originally been T1 in extent became T2. In the majority of missed cases of lung cancer, superimposed structures were mainly responsible for the failure to detect cancer.*

Source: Quekel LGBA, et al. *Chest* 1999;115:720-724.

Although lung cancer is the second most common cancer in both men and women and the leading cause of cancer death in both men and women, chest radiography is generally considered not sufficiently sensitive or specific to be used to screen high-risk populations. Part of the sensitivity problem relates to the frequency with which early lung cancer lesions are missed on chest radiograph. Estimates in the literature on the proportion of missed lung cancers on chest radiographs range from 25-90%. However, these numbers emerge from studies of divergent design with distinct end points (for example, one estimated the detection of solitary pulmonary nodules rather than documented lung cancer). Based upon retrospective radiograph reviews, most estimates of the error rate for the detection of lung cancer range between 20-50%.

Quekel and colleagues set out to establish the miss rate for the detection of early lung cancer based on the chest radiograph in a large community hospital in the Netherlands. Three radiologists reviewed the chest radiographs of 259 patients with biopsy-documented non-small-cell lung cancer and nodular lesions on radiograph. By consensus, detectable radiographic abnormalities were missed on 49 (19%) of the patients. As might be expected, missed lesions tended to be smaller than recognized lesions. About three-fourths of missed lesions did not have sharp borders. Although no significant differences were noted between missed and recognized lesions in sites of the lung involved with tumor, superimposing structures were more frequently noted in radiographs with missed lesions.

Delay in diagnosis ranged from a few weeks to more than 24 months. In about 25%, the delay was less than six months; in about 18%, the delay was 6-12 months. One-third of patients had a delay of 12-24 months and 25% had a two-year or greater delay. In 28 patients (57%), the missed diagnosis did not result in a change in tumor stage; 22 T1 patients stayed T1 and six T2 patients stayed T2. In 21 patients (43%), T1 patients became T2.

COMMENT BY DAN LONGO, MD

In the litigious climate of medicine at the end of the second millenium, we all have experienced (and do so too frequently) being asked one's medicolegal opinion about the consequences to patients of delays in diagnosis. Most frequently the question takes the following form: "Mr. X is now dying from progressive lung cancer, but we feel that if the radiologist had made the diagnosis earlier, he could have been cured. Would you please testify that during the period between the radiograph with the missed diagnosis and the time of the actual diagnosis that the tumor went from being curable with surgery to incurable?"

Quekel et al address this issue directly in the discussion of their paper. Given the fact that 19% of patients have missed lesions and in 43% of those (8% of the total) the tumor progresses from T1 to T2, Quekel et al estimate that those who progress go from a five-year survival rate of 61% to a five-year survival rate of 38%—a decline in five-year survival of 23%. It is remarkable that the rate of clinical progression in this series appeared to be so low. In this study, 75% of the patients with missed lesions were not diagnosed for

periods of more than six months. Yet the fraction with documented disease progression is quite small.

Tumors are missed for a variety of reasons: indistinct borders, too small, masked by overlapping or superimposed structures. However, the 19% miss rate reported here in the setting of a community hospital seems quite good and seems unlikely to be improved upon with current chest radiograph technology. It is possible that application of newer technology, for example, spiral computed tomographic (CT) scanning, may improve the sensitivity of the test. One study from Japan suggested that spiral CT was a better test than plain radiography.[1] However, the time and expense associated with a spiral CT make it less cost-effective than would be hoped for in a screening tool. Some less than optimal choices are still being made. (*Dr. Longo is Scientific Director, National Institute on Aging, Baltimore, MD.*) ❖

Reference

1. Kaneko M, et al. *Radiology* 1996;201:798-802.

Pharmacology Update

Orlistat Capsules (Xenical-Roche Laboratories)

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

The fda has approved the highly anticipated lipase inhibitor, orlistat (Xenical-Roche) for the management of obesity. The drug is an inhibitor of pancreatic and gastric lipases in the lumen of the gastrointestinal (GI) tract. Inhibition of these enzymes results in a reduction of the amount of dietary fat absorbed and associated caloric intake. Roche has already marketed orlistat in 17 countries, where it has been used in more than 1 million patients.

Indications

Orlistat is indicated for obesity management (weight loss and weight maintenance) when used in conjunction with a reduced-calorie diet. It is indicated for obese patients with an initial body mass of 30 kg/m^2 or greater and in patients with an initial weight of 27 kg/m^2 or greater in the presence of other risk factors such as hypertension, diabetes, or dyslipidemia.[1]

Dosage

The recommended dose of orlistat is 120 mg three times a day with fat-containing meals. It may be taken during or up to one hour after meals.[1] Gastrointestinal side effects may be reduced by consuming a high-fiber diet and reducing the amount of dietary fat.[8]

Patients should be advised to take a multivitamin supplement containing fat-soluble vitamins. These should be taken two hours before or after orlistat (e.g., bedtime). Orlistat is available as 120 mg capsules.

Potential Advantages

Orlistat acts within the gastrointestinal tract with negligible systemic exposure or systemic effects.[2-4] In clinical trials, orlistat was reported to improve lipid profiles (total cholesterol and low-density lipoprotein cholesterol) and fasting serum insulin.[5] Some studies report an improvement in triglyceride levels as well.[6,7] Improved glycemic control has been reported in type 2 diabetic patients as reflected in glycosylated hemoglobin and reduced sulfonyurea dose compared to placebo.[6]

Potential Disadvantages

The most common side effects of orlistat are gastrointestinal and include flatus with discharge (40.1%), oily spotting (32.7%), fecal urgency (29.7%), fatty/oily stool (19.8%), fecal incontinence (11.8%), and increase in defecation (11.1%).[5] Diets high in fat may increase GI side effects. Most GI events last less than one week and generally no more than four weeks. In some individuals, however, GI side effects may continue for more than six months.[1] The absorption of fat-soluble vitamins may be reduced by orlistat, particularly vitamins D, E, and beta carotene. Patients should be advised to take multivitamin supplements containing fat-soluble vitamins while on the drug.[1] Vitamin K absorption may also be decreased. Patients on concomitant warfarin therapy should be monitored carefully.[1] Orlistat should be used in caution with patients with a history of hyperoxaluria or calcium oxalate nephrolithiasis as increased levels of urinary oxalate may result.[1] It is also possible that orlistat may increase gallstone formation since cholecystokinin release is inhibited by the drug, decreasing gallbladder contraction.[11] Orlistat is contraindicated in patients with chronic malabsorption syndrome or cholestasis.[1]

Comments

Orlistat is a reverse inhibitor of gastric and pancreatic lipases. Inhibited lipases fail to hydrolyze dietary triglycerides into absorbable free fatty acids and monoglycerides, preventing absorption. Effects are seen as soon as 24-48 hours after dosing. After discontinuation

of the drug, fecal fat content returns to pretreatment levels within 48-72 hours.[1] About 30% of ingested fat is lost in the feces during orlistat therapy. Increasing the dose or increasing the amount of dietary fat does not significantly affect the percent of fecal fat lost.[2] In two large trials (n = 892, 688) using intent-to-treat analysis and last observation carried forward technique, orlistat-treated patients lost 8.76 kg-10.3 kg vs. 5.81-6.1 kg for placebo-treated patients at one year when used in conjunction with a hypocaloric diet.[5,9] When subjects were switched to a eucaloric (maintenance) diet after one year of therapy, orlistat-treated patients regained less of their weight lost (35.2%), compared to 63.4% for placebo-treated patients.[5] Over two years, 34.1% of orlistat-treated patients lost 10% of initial body weight and 57.7% lost 5%, compared to 17.5% and 37.4% for placebo. Weight loss from initial body weight was 7.6% vs. 4.5%. The two-year completion rate ranged from 45% to 63% for these studies. In a one-year study involving obese patients with type 2 diabetes, orlistat reduced total cholesterol, LDL-cholesterol, triglycerides, and improved glycemic control as indicated by decrease in glycosylated hemoglobin (mean, -0.28% vs +0.18%) and significant reduction in the dose of sulfonylurea medication (23% vs 9%).[6] The improvement in the lipid profile appears to be independent of weight lost.[5] Obese patients on orlistat were reported to be less likely to progress from normal glucose tolerance to diabetic or impaired glucose tolerance.[1] The cost of orlistat is about $1.10 per capsule or $3.30 per day.

Clinical Implications

Clinically significant obesity is classified as BMI of 30 kg/m^2 or greater. The recent National Health and Nutritional Examination Survey III (NHANES III) estimated the prevalence of obesity in the U.S. population to be 22.5%.[10] Current treatment modalities include diet and behavior modification, exercise, pharmacologic intervention, and surgery. Pharmacologic interventions include anorexiants such as phentermine and subutramine. Orlistat offers an antiobesity drug that is different from anorexiants in that it has a nonsystemic mechanism of action. However, the long-term effects of reducing free fatty acids and increasing triglycerides in the GI tract are not known. Weight losses produced by orlistat are quite modest. The weight loss differential between orlistat and placebo is only 3-4% of body weight after one year. The improvements in the lipid profile are also modest (e.g., approximately an 8% reduction in LDL-C), and these changes were only achieved in conjunction with a hypocaloric diet and behavior modification in a controlled study setting. The results may be further clouded by a high dropout rate and potential bias using the last observation carried forward technique for data analysis.[12] It is unclear how the drug will perform in the "real world" setting where diet and lifestyle are less likely to be controlled. ❖

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CME Questions

36. All of the following have been used to treat SSRI-induced sexual dysfunction *except*:

a. bupropion (Wellbutrin).
b. cyproheptadine (Periactin).
c. buspirone (BuSpar).
d. alprazolam (Xanax).
e. sildenafil (Viagra).

37. Which is true about orlistat?

a. It suppresses appetite.
b. It prevents carbohydrate absorption.
c. Most people lose about 30% of their body weight.
d. Very little of the drug is absorbed systemically.

38. In an ambulatory sports medicine clinic practice, the Ottawa Ankle Rules can be used to:

a. identify osteochondral lesions of the talar dome.
b. identify those ankle ligament injuries requiring immediate surgical repair.
c. screen acute ankle injuries prior to obtaining x-rays.
d. guide rehabilitation of ankle injuries.

39. What fraction of lung cancers are missed by routine chest radiography?

a. 14%
b. 19%
c. 29%
d. 43%
e. 72%

By Louis Kuritzky, MD

Fexofenadine HCL on Quality of Life and Work, Classroom, and Daily Activity Impairment in Patients with SAR

Second generation antihistamines (2-GA) have been developed to avoid the adversities common to first generation agents (1-GA), such as sedation, drowsiness, and performance impairment. Since these 2-GA have little ability to cross the blood-brain barrier and are less lipophilic, they should be relatively free of the common 1-GA side effects. Multiple trials have demonstrated that these agents are safe and efficacious for seasonal allergic rhinitis. The current study was designed to measure the effect of fexofenadine, a 2-GA, on general health, disease-specific quality of life, and work, classroom, and daily activity impairment. Tools used for measurement of outcomes included the Rhinoconjunctivitis Quality of Life Questionnaire, the Allergy-Specific Work Productivity and Activity Impairment Questionnaire, and the SF-36.

Almost 2000 patients participated in two randomized, placebo-controlled trials that were pooled for final analysis. At baseline, substantial numbers of individuals suffered embarrassment by allergy symptoms some to all of the time (70%), and being troubled by practical problems such as having to carry tissues or rub/blow their nose repeatedly (98%); also, more than 91% of sufferers reported impairment in ability to do daily activities, work productivity, and classroom productivity.

Within one week of active treatment, patients reported significantly improved quality-of-life scores and work performance. Classroom performance and missed time from class were similarly improved with fexofenadine 60 mg bid as soon as one week into active treatment. In addition to overt symptom control, fexofenadine is effective in enhancing important life quality and performance issues for seasonal allergic rhinitis sufferers. ❖

Tanner LA, et al. Am J Managed Care 1999;5(4):S235-S247.

Egg Consumption and Risk of Heart Disease

Common wisdom has suggested that reduction in egg consumption may be beneficial for cholesterol lowering and, hence, reduced risk of cardiovascular end points. Though widespread in its intuitive appeal, there are few data to support such an intervention. This report used two ongoing prospective cohort studies—the Health Professional Follow-up Study (1986-1994) and the Nurses Health Study (1980-1984)—to assess the relationship of egg consumption and cardiovascular end points. Combined, the population of 117,933 men and women provides more than 1000 cardiovascular end points from which to derive associations.

There was no evident increased risk for any cardiovascular end point associated with egg consumption. This lack of increased risk was true whether subjects consumed less than one egg, 2-4 eggs, 5-6 eggs, or more than eight eggs per week.

In subgroup analysis, diabetic men and women had an increased risk of CHD when they consumed more than one egg per week (RR = 1.49-2.02). The observation that diabetic men and women demonstrated modest increased risk should stimulate further evaluation in this population in particular; postulates as to the diabetic-egg-CHD relationship include aberrancies in cholesterol transport from decreased apolipoprotein E and increased apolipoprotein C-III levels in diabetic patients.

Ho and associates conclude that egg consumption as high as 1 egg daily or greater is not associated with an increased risk of cardiovascular end points. ❖

Ho FB, et al. JAMA 1999;281: 1387-1394.

Fasting Plasma Glucose and Glycosylated Hemoglobin

The diagnoses of diabetes mellitus (DM) has important health and social implications. Recent revision of diagnostic criteria for DM suggests that persons with fasting plasma glucose 126 mg/dL or greater be diagnosed as diabetic, whereas previously the diagnostic cutoff had been 140 mg/dL. The current study evaluated whether persons with DM diagnosed by the new criteria manifest abnormal hemoglobin A-1-C levels, the diagnostic marker by which treatment is indicated and monitored.

Davidson and colleagues had data on hand from two large data sets, the National Health and Nutrition Examination Survey (NHANES III) (n = 2284), and the Meta-Analysis Research Group Data Set (MRGDS) (n = 7908), from which they were able to compare impaired fasting plasma glucose levels with hemoglobin A-1-C levels.

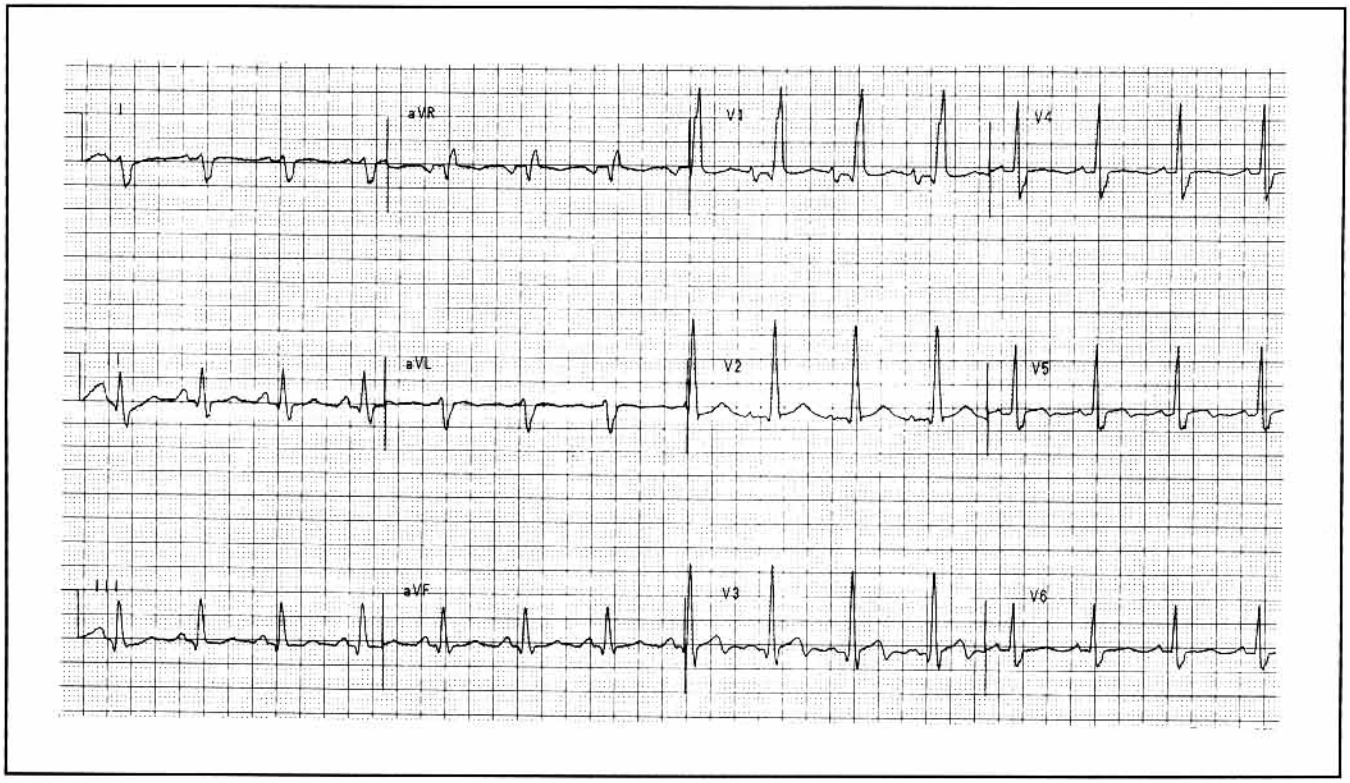
Less than 0.2% of persons from NHANES III with fasting plasma glucose over 126 had a hemoglobin A-1-C greater than 7.1%, the generally acknowledged demarcation level indicating necessity for treatment. Similarly, less than 2.5% of MRGDS of subjects had a hemoglobin A-1-C greater than 7.3% when fasting plasma glucose was greater than 126.

Davidson et al suggest that improved accuracy of the diagnosis of diabetes could be achieved by restricting the diagnosis to those with elevated fasting plasma glucose coupled with abnormal hemoglobin A-1-C greater than 7.7, and that individuals with less impairment of hemoglobin A-1-C should be classified as having impaired fasting glucose, treated with diet and exercise alone. ❖

Davidson MB, et al. JAMA 1999;281: 1203-1210.

An Abnormal ECG in an Asymptomatic Man

By Ken Grauer, MD



Clinical Scenario: The ECG shown in the Figure was obtained from a completely asymptomatic 56-year-old man. How would you interpret this ECG? What would you suspect the patient to have (have had)?

Interpretation: There is a normal sinus rhythm at a rate of 85 beats/minute. The PR interval is normal. However, everything else on this tracing is distinctly abnormal. The QRS complex is clearly prolonged in a pattern consistent with bifascicular block. Specifically, the qR complex in lead V_1 with tall R wave and the wide terminal S waves in leads I and V_6 are consistent with right bundle branch block (RBBB). In addition, the markedly deepened S wave component of the QRS complex in lead I, together with relatively positive complexes in the inferior leads, is consistent with the rightward axis of left posterior hemiblock (LPHB). The relatively tall and peaked P waves in lead II, and biphasic P wave in lead V_1 with peaked initial component and deep negative terminal component are consistent with biatrial enlargement. Small but definite Q waves are seen both in inferior and anterior precordial leads (the latter most likely responsible for loss of the rsR' pattern in lead V_1). Finally, ST segment and T wave morphology is abnormal: The upright T wave in lead V_1 suggests a primary T wave change (the T wave in lead V_1 with RBBB is usually directed *opposite* to the tall terminal R wave)—and beginning T wave inversion in leads V_3 and V_5 suggests an ischemic process.

In view of the fact that this patient is completely asymptomatic, the changes on this ECG are probably not acute. However, biatrial enlargement, bifascicular block, inferior and anterior Q waves, and abnormal ST-T wave changes all strongly suggest a cardiomyopathy that is most likely ischemic in etiology from prior silent infarction(s). At the least, further evaluation with an echocardiogram would seem warranted. ❖

In Future Issues:

Prediction of the Risk of Bleeding During Anticoagulation Treatment for Venous Thromboembolism