Editorials

Nicotine Patches and Nicotine Gum: Déjà Vu All Over Again?

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What a difference a decade makes. Prior to 1984, smoking cessation techniques consisted of a hodgepodge of unproven but much-touted chemicals, diets, aversive stimuli, hypnotherapy, self-help manuals, special filters, acupuncture and expensive behavior modification clinics or seminars. When the Food and Drug Administration approved the nicotine-containing chewing gum (Nicorette), smokers and physicians alike were, in a word, hooked.

The only problem with the gum was that it didn't work very well—or at least not for very long. Although the gum was approved for use as an adjunct to a comprehensive program of behavior modification, most physicians offered few instructions and even less follow-up. In addition, some persons became addicted to the cure.

Recent clinical trials purport to show that nicotine replacement in the form of a skin patch is beneficial in smoking cessation. The findings were so promising (up to a 35 percent abstinence rate at 12 months when combined with behavioral therapy) and the FDA was so concerned about smoking that it permitted four different pharmaceutical companies to market the patch.

Following lavish press conferences with famous actresses who have stopped smoking, the dropping of a huge inflated cigarette from the top of a skyscraper into a huge inflated ashtray on the ground, giveaways of thousands of watches to physicians and pharmacists, full-page advertisements in newspapers and magazines, and $1.5 million in television commercials during the Super Bowl, nicotine patches appear to have become the latest status symbol and fashion craze all rolled into one.

The patch appears to be well tolerated topically and systemically. Compliance is good enough for the patch to have been used safely and effectively in a psychiatric setting by patients who were not trying to stop smoking. For now, all smoking cessation approaches from the prepatch era must take a back seat.

But, as with nicotine gum, the problem with this new-fangled nicotine replacement system is relapse. The high success rates reported in the clinical trials may in part be attributed to the fact that the research was conducted in clinics that specialize in the treatment of smoking cessation. This may further explain why placebo groups in some studies fared better than the intervention groups of most other methods.

Cost is also worth noting. The research subjects received the patches at no charge, whereas the cost of a standard course of therapy with the patch exceeds $350 (a problem that may be resolved by reimbursement from an employer or insurance company for nicotine replacement therapy). The cost factor calls to mind the concern expressed by clinicians in the Cancer Prevention Research Program at the Fred Hutchinson Cancer Research Center in Seattle: Traditional stop-smoking materials and programs have been aimed largely at white, middle-class Americans and seldom at low-income groups, high school dropouts, young women or minority groups.

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Pharmaceutical company claims notwithstanding, smoking is not simply an addiction to nicotine. Social and psychologic factors also play determining roles. Promotions for various pharmacologic agents for smoking cessation wrongly reinforce the notion that smoking is primarily a medical problem with a simple, prescribable, nonindividualized solution. When a patient requests a drug "that will help me stop smoking" the physician must confront the dilemma of not wishing to dash expectations while emphasizing that a drug is at best an adjunct, not the single solution.

Simple, caring, straightforward counseling by physicians has been found in numerous studies to be well received and to have significantly increased the likelihood of smoking cessation. A discussion about the diseases caused by smoking is important but the benefits of not smoking must also be emphasized.

Solely educating patients about the facts of smoking in a single office visit is unlikely to result in instant behavioral change. But such simple behavioral techniques as deep breathing, the substitution of lemon drops or mints for cigarettes, and the use of creative analogies related to the patient's hobbies, occupation or financial well-being can succeed in changing the patient's attitude toward smoking. For instance, a pack-a-day cigarette buyer will spend in excess of $800 a year—or about $10,000 in a decade. As one patient exclaimed, "I've smoked a Porsche."

Individualizing the message to the patient is the cornerstone of success in patient education. In the case of a 15-year-old girl, the physician should not focus on such abstract concepts as lung cancer and emphysema but rather on the cosmetic aspects of yellow teeth and bad breath. A discussion about smoking with a truck driver, for example, might highlight fewer lost paydays and greater stamina.

Most surveys have found that more than half of physicians do not advise patients to stop smoking; of those who do discuss smoking cessation, few physicians spend much time or provide specific suggestions. Because physicians, most of whom receive little training in smoking cessation, have little success in getting patients to quit, many simply avoid the issue.

Although the great expectations for success with the nicotine patch may not be fulfilled, the highly publicized introduction of the patch may stimulate physicians to take a more-informed and personal role in smoking cessation.

Anticoagulation in Atrial Fibrillation

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As emphasized by Drs. DeAntonio and Movahed in their article in this month's issue of *AFP*, atrial fibrillation is an extremely common finding in the general adult population, and a major source of symptoms, morbidity and mortality. An estimated 1 million Americans have the disorder and the incidence continues to increase with age.[1] Without anticoagulation, the risk of embolic stroke is approximately 3 to 8 percent per year.[1,2]

Evidence now suggests that long-term anticoagulation with warfarin can significantly reduce the risk of stroke in patients with nonvalvular atrial fibrillation.[2-4] Moreover, low-intensity anticoagulation regimens (with dosage adjustment to maintain the prothrombin time ratio of 1.3 to 1.5 times control) have been shown to be safer, with comparable efficacy for preventing embolic stroke, than high-intensity regimens (aimed for a prothrombin

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time ratio of 1.5 to 2.0 times control). Despite the results of a number of large, randomized trials, a significant percentage of clinicians still fail to even consider long-term anticoagulation for patients with chronic atrial fibrillation.[5,6]

Clearly, long-term warfarin therapy is associated with an increased risk of bleeding—and in elderly patients, this risk might be expected to increase the longer anticoagulation is prescribed. However, most episodes of bleeding are minor. Moreover, with careful monitoring, the use of low-intensity regimens has significantly reduced the risk of major bleeding complications to well under 1 percent.[2]

In summary, clinicians would do well to reexamine their prescribing patterns. Long-term anticoagulation with warfarin is clearly indicated when atrial fibrillation occurs in conjunction with other disorders that significantly increase the risk of embolic stroke (i.e., transient ischemic attacks, cardiomyopathy, the presence of mural thrombus). Low-intensity anticoagulation should also be strongly considered for the large subgroup of patients with underlying coronary artery disease and nonvalvular atrial fibrillation.

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Isolated Systolic Hypertension in the Elderly

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Isolated systolic hypertension (systolic blood pressure greater than 160 mm Hg and a diastolic blood pressure of less than 90 mm Hg) is common in individuals 60 years of age and older. Isolated systolic hypertension is an independent risk factor for increased cerebrovascular and cardiovascular morbidity and mortality[1] and is found in about 6 to 8 percent of persons 60 to 69 years of age and in up to 18 to 20 percent of those 80 years of age and older.

Until recently, data on the treatment of hypertension in the elderly were available only in persons with systolic and diastolic hypertension.[2]

Several studies[3-6] have reported that lowering elevated systolic and diastolic blood pressure in elderly patients decreases the number of strokes and overall cardiovascular events. Although antihypertensive therapy is often prescribed in treatment of elderly patients with isolated systolic hypertension, there have been no data on which to base the decision to treat isolated systolic hypertension.

The recently completed Systolic Hypertension in the Elderly (SHEP) study[7] was designed to determine whether treatment of patients with isolated systolic hypertension would decrease the incidence of strokes and stroke deaths. A total of 4,736 patients were evaluated; 2,365 were assigned to active treatment. Active treatment included a stepped-care approach:

Step 1—administration of a small dose of a diuretic (12.5 mg of chlorthalidone per day) or a matching placebo; step 2—an increase in the chlorthalidone dosage to 25 mg per day. If this proved ineffective in reducing the systolic pressure to goal levels (i.e., a decrease of at least 20 mm Hg or a level below 160 mg Hg), atenolol, 25 mg per day (or in some cases reserpine, 0.05 mg per day) was added to the diuretic. If this proved ineffective, the dosage of atenolol was increased to 50 mg per day.

About 50 percent of patients responded to diuretic therapy alone. The mean age of the patients was 72 years; 57 percent of the subjects were women and 14 percent were black. Mean pretreatment blood pressures averaged 170/77 mm Hg for both the placebo and the treatment groups. Approximately 10 percent of the subjects had diabetes; 5 percent had a history of myocardial infarction, and 60 percent showed pretreatment electrocardiographic abnormalities.

The average follow-up period in the SHEP study was 4.5 years. Blood pressure decreased in the placebo and treatment groups, with most of the decrease occurring in the first year. The average five-year decreases in systolic and diastolic blood pressures were 12 mm Hg less and 4 mm Hg less, respectively, in the treated patients compared with the placebo group. At the end of the fifth year, the difference between the two groups was 11/3.4 mm Hg.

At the end of the five-year study, 213 deaths had occurred in the treatment group, compared with 242 deaths in the placebo group. Overall mortality was reduced by 13 percent. A significant decrease of 36 percent in total number of strokes and of 27 percent in fatal and nonfatal coronary events was noted in the treatment group, compared with the placebo group. This difference was achieved even though 35 percent of those assigned to the placebo group were placed on antihypertensive drugs during the trial. The benefit of treatment, therefore, may have been underestimated.

Treatment benefit was noted in patients with initial normal resting electrocardiograms as well as those with baseline electrocardiographic abnormalities. *Therapy posed no evidence of adverse effects in those with baseline electrocardiographic abnormalities.* Quite the contrary—the incidence of fatal and nonfatal coronary disease was reduced by 31 percent in this group of patients who were primarily treated with low-dose diuretic therapy. Regression of left ventricular hypertrophy was also noted in these individuals. Benefit was noted in patients under age 80 and over age 80.

The decrease in the incidence of nonfatal myocardial infarctions and coronary disease deaths in the treatment group is similar to the results noted in the European Working Party on High Blood Pressure in the Elderly (EWPHE) trial, in which elderly patients were also studied, and in the Hypertension Detection and Follow-up Program (HDFP) study.

In contrast to trials that failed to show a statistically significant decrease in coronary heart disease events in treated subjects, the SHEP, EWPHE and HDFP trials included patients with preexisting evidence of vascular disease. Thus, a reasonable probability existed that the number of cardiovascular events in a short four- to five-year trial would be sufficient to detect a difference between treated and control groups. The trial design and the mild degree of hypertension studied may have accounted for the lack of reduction of coronary heart disease events in some studies.[8]

One of the concerns of the investigators of the SHEP study was that elderly patients would not be able to tolerate medication and would experience more side