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Paul E. Slater, MD, MPH
Corina Costin, MD, MPH
Department of Epidemiology, Ministry of Health, 38 Keren Hayesod Street 92149, Jerusalem, Israel

Menthol Cigarettes and Esophageal Cancer

From 1950 to the late 1970s, the age-adjusted mortality rates of esophageal cancer for Whites have remained unchanged, while the rates for non-Whites (mostly Blacks) of both sexes have approximately doubled.[1–3] Despite our knowledge of various risk factors for esophageal cancer,[4,5] no major progress has been made in identifying etiologic agents responsible for the large inter-racial difference that has developed in esophageal cancer rates.[5–8]

As depicted in Figure 1, there is a rough correspondence between the increase in market share of menthol cigarette sales and the increase in non-White esophageal cancer mortality rates from 1950 to 1980. Because of its mild anesthetic properties, menthol was first used in cigarettes as a "medicinal" additive. Although menthol cigarettes were introduced in the 1930s, they did not exceed 3 per cent of the total market until 1949 when they began a slow but steady rise in market share. Sales leveled off at just under 30 per cent during the late 1970s.[9,10] Sales to Blacks and women accounted for most of the increase. As of the mid-1980s, about 62 per cent of cigarettes purchased by Blacks were mentholated, compared to only 23 per cent of cigarettes purchased by Whites.[11]

In addition to the ecological relation, several other facts are consistent with the hypothesis that menthol cigarette smoking is a risk factor for esophageal cancer:

- Combusting menthol produces compounds such as benzo[a]pyrene which are known carcinogens.[12–14]
- Menthol cigarette smoking is highly prevalent in a subgroup of the population that differs from the average according to diet and alcohol consumption.
- Menthol changes sensations of hot and cold [15–18] which may lead to unusual patterns of beverage consumption.

We analyzed existing data from a case-control study of esophageal cancer and found no menthol effect. Men who smoked menthol cigarettes for 10 years or more had a relative risk of 0.70 (95% CI= 0.29, 1.73), and women had a relative risk of 1.53 (95% CI=0.61, 3.86). Several shortcomings in the data limited our confidence in the findings:

- Blacks were not representative of Blacks in the general population, since most subjects came from teaching hospitals.
- We lacked details on potential effect modifiers of menthol cigarettes, including timing and exact type of alcohol consumed, various nutritional factors. Since menthol has an effect on sensations of hot and cold, it would also be desirable to have data on temperature and timing of drinking non-alcoholic beverages.
- Our study did not unambiguously classify brands according to mentholation, since 49 per cent of the brands had both menthol and non-menthol sub-brands.
- The study was relatively small—96 female and 216 male cases, and 157 female and 305 male controls.

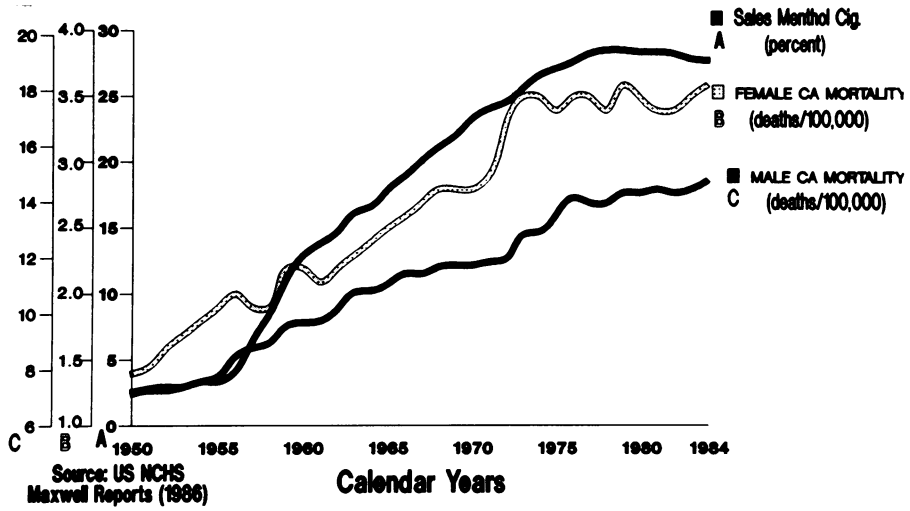

FIGURE 1—Menthol Cigarette Sales and Age-Adjusted Esophageal Cancer Rates for Non-Whites

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James R. Hebert, ScD
Geoffrey C. Kabat, PhD
Division of Epidemiology, Mahoney Institute for Health Maintenance, American Health Foundation, 320 East 43rd Street, New York, NY 10017

Attempts to Establish Nonsmoking Sections in Restaurants

Restaurants often lack nonsmoking sections, in spite of the fact that many nonsmoking patrons do not enjoy their food or meal in that atmosphere and consequently do not return. Since restaurants rely heavily on the return of their customers and on customer referrals, it is logical for nonsmokers to target restaurants for the establishment of nonsmoking sections.

Since neither Chicago nor the state of Illinois required non-smoking sections in restaurants, we targeted 30 restaurants without nonsmoking sections and with ≥30 seating capacity for an intervention. After collecting baseline data, the restaurants were offered free publicity (e.g., flyers, news stories) for establishing a nonsmoker section, a certificate, and channeling of customers from several organizations who indicated they would frequent restaurants with nonsmoking settings. Restaurant owners were also informed that a recent telephone poll in the area indicated 71 per cent of adults preferred to eat in restaurants that offered them the option of smoking or nonsmoking sections, and that three highly respected community institutions supported the venture. Fourteen of the 30 owners said they favored legislation mandating nonsmoking sections in public places. However, after three months only 10 per cent of 30 restaurants established permanent nonsmoking sections.

Numerous other factors may have influenced this outcome:

- Locally, the issue of mandating nonsmoking sections in public places was before the Illinois legislature for the sixth time.
- The president of the Chicago Restaurant Association had opposed all previous efforts to establish restaurant nonsmoking sections and distributed brochures urging opposition to the proposed legislation.
- A local anchorman was being sued by a tobacco company for his anti-smoking comments.
- Restaurateurs might think it unpopular and politically unwise to support our project by establishing a nonsmoking section.

It appears that an educational effort of this sort is not sufficient to effect nonsmoking changes in restaurants. The restaurateurs' disinclination to voluntarily establish nonsmoking sections seems to indicate the necessity for legislative efforts to mandate nonsmoking sections.

Leonard A. Jason, PhD
Eva M. Holton
Department of Psychology, DePaul University, 2323 North Seminary Avenue, Chicago, IL 60614-3928.

Editor's Note: An extended version of this research is available by writing Professor Jason at the university.

Awareness of Alzheimer Patients

During the severe stages of Alzheimer's Disease, "residence becomes a moot issue to the Alzheimer patient," according to an editorial on home health care in the Journal.[1] The author cannot be faulted for a statement that reflects the prevailing wisdom regarding the severely impaired individual but readers should know that there is growing evidence that the prevailing wisdom is misguided if not totally incorrect.

For example, in the course of an intensive behavioral treatment of severely cognitively impaired nursing home residents focusing on activities of daily living and communication,[2] our project staff members were forced by circumstances to move one of the treatment groups to a new location within the nursing home. The impact on the residents was far greater than we had expected: not only did many of our subjects comment on the move (contrary to the notion that advanced Alzheimer patients are not aware of their surroundings) but we observed clinically significant reversals in their ability to communicate and perform the basic activities of daily living.

It is impossible for those of us who have worked with these people over the last two years to consider them totally unaware of their surroundings or so deteriorated that they do not know when something is done to them.

I realize that this makes the course of the disease even more painful to contemplate and placement decisions more difficult to make. However, in the face of even this minimal evidence of awareness and sensitivity to surroundings, it would seem necessary to rethink our position and to include the Alzheimer's patient himself or herself in some way as well as the family in such important decisions as nursing home placement.

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Ruth M. Tappen, EdD, RN
Professor and Director, PhD in Nursing Program, School of Nursing, University of Miami, Miami, FL 33101

Dr. Blazer's Response

Dr. Tappen's letter concerning my editorial on home health care reminds clinicians to maintain sensitivity for their patients' perception, regardless of the nature and severity of their illness. Intense behavioral treatment, focused care directed toward improving activities of daily living and communication, however, must also be examined within the context of cost constraints.

These interventions have been demonstrated to be of benefit in the care of moderate to severely impaired Alzheimer's patients. Unfortunately, to my knowledge, lasting benefits of this care have not been demonstrated, i.e., the interventions are effective as long as they last. Most providers of institutional care do not possess the resources to provide such care. As a community of health care providers, we must constantly remind planners and third party payers of the demonstrated effectiveness of these interventions; but we must be realistic in our appraisal of their effectiveness, and accurately document the effectiveness of such interventions as they relate to the cost of providing them.

Regarding the inclusion of the Alzheimer's patients in decisions, such as nursing home placement, clearly this is an issue that can only be approached at