Women, Smoking, and Lung Cancer

Everyone knows that breast cancer is a women’s issue, but there is very little public awareness that lung cancer is very much a women’s issue as well. Ever since women in the United States have “come a long way, baby” and started smoking in greater numbers, their death rates from lung cancer have soared, nearing the earlier trend that was seen in men. In 1987, lung cancer became the number one cause of cancer death in American women, surpassing breast cancer. Among women, lung cancer has increased 451% in the past 30 years, and it is predicted that this rise will not plateau until well after the year 2010.

The increase in the incidence of lung cancer among women is almost entirely due to the increase in their tobacco use. Up until the 1920s, smoking by women was socially discouraged. But with the changing roles of women in our society, cigarette smoking, which is very much a dependence, ironically, has become a symbol of independence for women. More than 25 million American women smoke. One out of every four girls under the age of 18 smokes, and the prevalence of regular cigarette smoking among 12th grade girls is about 28%. More than 140,000 women die each year of smoking-related causes, and while the death rate from smoking-related disease for men has leveled off, women’s rates are rising dramatically.

In order to remain profitable, tobacco companies need to replace the hundreds of thousands of smokers who die each year of lung cancer and other smoking-related diseases. Presently, the tobacco industry spends $4.6 billion yearly (that is, $126 million a day) on tobacco advertising. In fact, advertising targeted at specific segments of the population, particularly young women and children, has ensured that there will continue to be smokers. Indeed, advertising is a potent weapon for tobacco companies in their war to win young smokers. Of adults who smoke, 90% start before the age of 18 years, and most “hard core” smokers begin between 11 and 13 years of age. Studies have shown that by the age of 6, children are as familiar with Joe Camel as they are with Mickey Mouse. Such familiarity is a known risk factor for tobacco addiction. When Joe Camel came on the scene, Camel’s market share among underaged smokers increased from .5% to 33%, making adolescents the fastest growing group of smokers in the United States. In addition, tobacco advertisements have exploited women’s and girls’ concerns with staying slim by emphasizing the weight controlling benefits of smoking. Six years after the introduction of Virginia Slims and other similar “women’s cigarettes,” the number of young girls smoking had increased by an astonishing 110%. A recent survey revealed that up to 34% of all high school girls were serious smokers.

It is time to seize the moment! There is no time in history when the tobacco industry has been under such scrutiny and when women’s issues have gained such attention. Coupled together, these circumstances offer health-care professionals (particularly women) an incredible opportunity to heighten public awareness of the fact that lung cancer is killing more women each year than breast cancer, and smoking will kill more of our children than drug abuse, alcoholism, suicide, and accidental deaths together. The credibility afforded to physicians on this subject by their patients and the general public is a powerful clinical tool which has the potential for preventing a significant number of people, including children and teenage girls, from smoking and for influencing those who do to quit. The fact that lung cancer is the leading cause of cancer death among women provides sufficient justification for aggressive action now—an action aimed at stemming this 20th century epidemic of preventable disease. Now is the time to make the world aware that smoking and lung cancer are very much women’s issues.

The American College of Chest Physicians (ACCP) Task Force on Women, Smoking, and Lung Cancer has been formed to publicize lung cancer as a women’s disease, to help women to stop smoking, and most importantly, to prevent our children from starting to smoke. For further information, contact...
Phrenic Nerve Dysfunction Following Coronary Artery Bypass Grafting
An Aggravation or a Real Problem?

The paper by Dimopoulou and colleagues in this issue of CHEST (see page 8), concerning phrenic nerve dysfunction following cardiac surgery, is a well-done and timely contribution to the literature. The authors have done a careful study, using sophisticated electrophysiologic analysis of the phrenic nerve function pre- and postoperatively to assess phrenic nerve dysfunction following cardiac surgery and to investigate a variety of associated or causative factors. Their study clearly demonstrates that the use of topical ice slush increases the incidence of phrenic nerve dysfunction. This idea, while not new, has not been demonstrated as elegantly as in the current study. The authors quite rightfully suggest that while ice slush has been a relatively common part of myocardial protection, it probably adds little to myocardial protection during an era of cold blood cardioplegia, but it does contribute to a markedly increased incidence of postoperative phrenic nerve dysfunction. They were unable to demonstrate any other significant preoperative or intraoperative factor associated with phrenic nerve dysfunction except the use of ice slush.

The topic of phrenic nerve dysfunction following cardiac surgery has been discussed over many years with relatively inconclusive results. Many factors have been implicated as contributing to an increased incidence of phrenic nerve dysfunction, including diabetes, direct injury to the phrenic nerve, devascularization of the periphrenic nerve blood vessels, and patient variability. Most, if not all, investigators believe that phrenic nerve injury in most patients is associated with a cold injury. The authors describe phrenic nerve dysfunction as being clinically relatively unimportant. I would disagree with the authors on this point. Although the postoperative courses were not statistically demonstrably different in patients with or without phrenic nerve dysfunction, they did document some clinical problems.

My experience with these patients has been similar to that of the authors; however, we believe that phrenic nerve dysfunction does have a significant negative impact on the patient’s overall outcome. We have seen prolonged ventilatory support, the inability to extubate early, and an increase in the length of stay, both in the hospital and in the ICU, in this group of patients. We have also seen what the authors describe as “noncardiac dyspnea,” and it is a very bothersome symptom for patients. It has prevented them from returning to a state of perceived good health and has markedly reduced their ability to exercise postoperatively. We have seen the occasional patient with a pleural effusion that has resulted in an underlying symptomatic trapped lung.

We would agree with the authors that it is unusual for phrenic nerve dysfunction to lead to mortality, but it certainly can occur. The authors describe a patient with bilateral phrenic nerve dysfunction who was probably lucky to survive. The only contributing factor to this patient’s postoperative morbidity was the need to maintain him on a ventilator, a necessity directly related to phrenic nerve dysfunction. Invariably, there are patients lost each year because of this problem alone; the authors simply were able to prevent a death in this case because of attentive postoperative care.

I think the most important issue in the clinical importance of phrenic nerve dysfunction is the patient’s underlying pulmonary reserve. In a patient with good pulmonary function, this dysfunction will likely cause no clinical signs or symptoms. On the other hand, in a patient with underlying pulmonary compromise, phrenic nerve dysfunction can be extremely debilitating. The authors’ surgical patients were relatively young and did not seem to have particularly severe disease. I think that phrenic nerve dysfunction in the patients seen in the US is more of a clinical problem because of the significantly older population that we see and operate on. The length of stay that the authors describe is relatively long compared to what is currently expected in the US. We have had trouble getting a patient with phrenic nerve dysfunction out of the hospital in our usual 4- to 5-day postoperative length of stay.

References
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