

Another Negative For Smoking

By: Gil Lederman, M.D.

There are many reasons not to smoke. I personally try to encourage smokers not to smoke. My children are regularly warned of the numerous risks of this ugly and stinky habit. At home there is no smoking. A new young staff member at our Department was recently seen smoking while being driven in her friend's car. Since that evening more than 8 months ago I routinely ask her about smoking and discourage continued smoking cessation. Why would one assume the risks of smoking when at this early point, cessation will buy so much especially in terms of prevention of disease and even financial savings. In fact, at most any age, stopping smoking pays big dividends. A dividend more precious than money - good health.

Recently an article by Dehertog in the prestigious Journal of Clinical Oncology evaluated the risks of skin cancer and smoking. Smoking is well known to be associated with a variety cancers in multiple sites including the head and neck, lung, bladder, kidney, esophagus, cervix, and elsewhere. Does one need to learn of yet another risk for smokers to discourage this habit?

For over 15 years studies have suggested that there are greater risks of developing squamous cell carcinomas of the skin in smokers than in non-smokers. Other studies even reported that smokers have a higher rate of metastases with melanoma than non-smokers. Metastases are nodules of cancer that have moved away from the primary or initial site. Usually they spread into the blood stream to hit vital organs such as the liver, lung and brain. No site is immune to metastases from melanoma.

The most important risk for development of skin cancers is skin exposure. Other factors, such as smoking are being studied and are apparently an issue. A Dutch skin cancer study was commenced in 1997 in Leiden. A regional registry allowed access to all patients with squamous cell carcinomas from January 1, 1985 through December 31, 1997. There were 560 patients with squamous carcinomas seen. Also seen were 1,765 with basal cell cancers. Basal cell cancer is a different type of skin cancer when evaluated by pathologists or physicians trained in microscopic diagnosis. Often the dermatologist is able to distinguish the two.

Patients in other hospital systems in the general area were recruited to enlarge the base of the study and yet patients older than 80 years were excluded from the study to diminish bias in the analysis.

Malignant melanomas, and other type of malignancies were also evaluated in 155 patients. Control groups were seen in an ophthalmology clinic. They were chosen because of the same geographic area being seen at the same university hospital. Yet they were in the hospital for other reasons not associated with the skin.

Patients were seen in the dermatology clinic were examined. Information was obtained about the patient's smoking history as well as other risks factors for skin cancers. Smokers were asked about use of cigarettes, cigars, pipes or other, at what age smoking started and stopped and the number of cigarettes, pipes, and cigars per day per period for the total amount of tobacco was compiled.

Patients were also providing information on ethnic background, medical history, exposure to carcinogens and propensity to sunburn as well as development of freckling in childhood, natural hair color at age 20, painful sunburn, blistering from exposure and hours spent outside while working and not working. Many of these issues relate to the risk of developing a skin malignancy.

One thousand nineteen patients were interviewed and examined. Some were excluded because of other cancers or families with a history of skin cancer, kidney transplant or other syndromes.

Those with prior skin cancers or kidney transplants have a higher rate of skin cancers than those without these risk factors. Overall 966 people were eligible for this study and 580 had skin cancer. Of 966 people 320 never smoked cigars, cigarettes or pipes while 560 smoked only cigarettes. Ten smoked only cigars, six only pipes, 43 smoked both cigarettes and cigars, 12 both cigarettes and pipes two cigars and pipes, and 12 smoked all three types of tobaccos.

The researchers found that fair skin type was associated with increased rates of skin cancer. Dermatologists have known this for years. It is the reason so much attention is lavished on those with Northern European roots - especially our Irish neighbors. Blue eyes or light color eyes and red or blond hair were associated with squamous carcinoma and malignant melanoma and to a lesser degree basal cell carcinoma.

The hours of sun exposure per year were associated with squamous cell cancers, nodular basal cell cancers and superficial multifocal basal cell cancer but inversely with melanoma. It was noted that painful sunburns before the age of 20 were associated with melanoma. My wife, a dermatologist, routinely gets the children out of the sun especially during the middle of the day when the sun is most severe. Also, skin sun protection creams are regularly used to cover all exposed surfaces - and re-applied on a frequent basis.

The authors noted that there was a, "strong association between smoking and squamous cell carcinoma (regardless of other skin cancers)." The relative risk was 2.3 of developing squamous cell carcinoma amongst smokers. It was noted that 23% of men were current smokers and 58% were ex-smokers while in women 17% were current smokers and 36% ex-smokers. Smokers were also more likely to have a higher degree of damage to the skin such as elastosis and actinic keratoses. It is felt that sun as well as smoking, prematurely ages the skin. Recently I lectured at the National Anti-aging meetings in Las Vegas. This is a topic of great interest in America.

Why give up smoking? Well the researchers found that the risk of squamous carcinoma was higher among current smokers than among former smokers. The relative risk of squamous carcinoma being observed among current smokers compared to former smokers is 1.7. Current smokers have nearly double the skin cancer rate compared to non-smokers - another reason to quit now.

Furthermore, the researchers found that there was a dose response curve. That is, the greater the number of cigarettes smoked the higher likelihood of developing squamous cell carcinoma of the skin.

Pipe smokers had a much higher incidence of developing squamous cell carcinoma with a relative risk of 10.0.

The researchers wrote, "In this case control study and of a variety of skin cancers, a significant association was found between tobacco smoking and cutaneous squamous cell carcinoma, with a higher risk for current smokers than for former smokers. A clear relationship with the number of cigarettes smoked was observed. In particular cigarette and pipe smokers seem to have a high risk of developing squamous cell carcinoma, where cigar smokers were not at significantly increased risk."

Why do smokers get more skin cancers? Well, there are many reasons. Tobacco smoke may be a carcinogen for development of skin cancers. It is known that in experiments with rabbits and mice that applying smoke to the skin induces squamous carcinomas. Also, the association between several malignancies at sites remote from direct smoke contact such as in the bladder, pancreas or cervix may suggest that there is a systemic carcinogenic effect from tobacco smoke. That suggests that the ingredients of tobacco smoke may induce the development of cancers. Tobacco smoke is known to contain several carcinogens. Tobacco smoke may set off mutations of genes resulting in the development of skin cancers.

It has also been suggested that smoking may diminish the immune system. Researchers have noted that tobacco smoke does suppress the immunologic function and people who are immunosuppressed such as those undergoing kidney transplant are known to have an increased risk of squamous carcinomas.

The researchers concluded that, "This study identified tobacco smoking especially cigarette and pipe smoking, as a risk factor for cutaneous squamous cell carcinoma. The strength of the association, the dose dependency, the experimental evidence, the biologic plausibility, and the analogy with squamous cell carcinoma of the lung, larynx, bladder and cervix suggests causality and supports the growing evidence of smoking as a risk factor for squamous cell carcinoma in general. In order to reduce the risk of cutaneous cell carcinoma, not only should sun exposure be reduced but smoking should be discouraged as well."

Was I correct to warn the young staff member about smoking? Yes I believe it was my moral responsibility even if it doesn't seem to be politically correct. If her life can be improved, why not?