Buerger's Disease and an Unusual Relationship to Smoking

Buerger’s disease was first described by Dr. Leo Buerger (go figure) in 1908. He noticed an unusual pattern of young Jewish male smokers who had developed occlusion of small arteries in the hands and feet. These arterial blockages resulted in chronic sores and eventual amputations. Dr. Buerger examined the amputations specimens from these patients and found a very dense inflammation around small and medium sized vessels. The artery walls were not destroyed as is normally seen in atherosclerosis or true arteritis (a disease of the immune system attacking the artery). The name of the disease has since been changed to thromboangiitis obliterans, but for obvious reasons it is still known as Buerger’s disease.

Since then the disease has been better characterized as one of primarily young males between the ages of 25 and 35. 10 to 20% of cases are women. It is rare to diagnose Buerger’s after the age of 45. It is more common in Eastern Europe, the Mediterranean and the Orient. Half of patients have symptoms limited to the legs and feet, 10% involve the hands and forearms, the remainder involve both. Patients come to a doctor complaining of severe pain in the involved extremity. There are commonly chronic sores. The fingers or toes may be cool and slightly swollen.

Invariably patients have a history of heavy smoking, usually from childhood with 3 or more packs a day being not uncommon. The link of the condition to tobacco exposure is supported by the fact that the disease is more common in countries with heavy use of tobacco and is perhaps most common among natives of
Bangladesh who smoke a specific type of cigarettes, homemade from raw tobacco, called "bidi". It has not discussed in the medical literature what role “medical marijuana” might play in this disease.

Examination of the patient will show normal pulses and arterial exam above the area of pain, but abruptly cut off small and medium sized arteries at the area involved. There can be ulcers or even gangrene of the toes, or less commonly the fingers. Laboratory tests are done to exclude other possible causes, but the presenting history and exam along with the smoking history is usually enough to strongly suspect the diagnosis.

Treatment of Buerger's disease is focused on three areas, control of the pain, healing of the sores, and cessation of smoking. Every patient who quits smoking will stabilize their disease and heal the ulcers. In contrast, those who continue to smoke will invariably come to amputation, at least of toes, and quite possibly the legs below the knee. Strong pain medications are required and addiction to this medication along with smoking can be a problem. The sores can be very difficult to treat. They tend to be very slow to heal, antibiotics and long term dressing care are necessary.

It is difficult for non smokers to understand the difficulty these patients experience in smoking cessation. It would seem reasonable that faced with chronic pain and loss of toes or fingers a person would make the effort to stop smoking. The outcome for patients is directly related to whether they stop smoking. Those who quit smoking have a 94 % of avoiding amputation. Those who continue to smoke have a 43% chance of major amputation over the following 6 years. Fortunately, the decrease in smoking in the US has been associated with a fall in the frequency of this unusual disease which now affects about 15 people in 100,000.
Questions or comments can be addressed to Frederick M. Ilgenfritz, MD, FACS, c/o Bitterroot General & Vascular Surgery, 1150 Westwood Drive, Suite C, Hamilton, MT 59840 or visit www.bgvs.us.