The Connection between HPV, Head and Neck Cancers

There's been a dramatic shift in head and neck cancer over the last 15 to 20 years. Instead of mainly being due to alcohol or tobacco use, human papillomavirus (HPV) has become the main cause.

The Centers for Disease Control and Prevention (CDC) reports roughly 42 million Americans are infected with types of HPV. About 13 million Americans, including teens, are infected each year. Patients with head and neck cancer being seen often have tumors on the lining of the throat, mouth, voice box and the structures above the shoulders.

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"The majority of patients with head and neck cancer now come to see us with cancers of the tonsils and back of the tongue. As the incidence of cigarette smoking has decreased significantly, we've seen the number of patients with head and neck cancer has remained the same," says Guy Petruzzelli, MD, PhD, the physician in chief and surgical quality officer at OSF HealthCare Saint Francis Medical Center and the OSF HealthCare Cancer Institute. "We now know that those patients have a cancer that is definitely related to chronic infection or exposure to the human papillomavirus, or HPV."

The best way to get protected from HPV is to get the HPV vaccine, which is offered to kids starting at 9 years of age. The CDC recommends children get two doses of the vaccine before they are 11 to 12 years old.

Safety of the HPV Vaccine

"The HPV vaccine is not made up of any genetic material at all. The HPV vaccine is made up of the shell of the virus, which is not genetical material," Dr. Petruzzelli says. "There is absolutely no way to contract human papillomavirus infection from the HPV vaccine. It is an incredibly safe vaccine."

While HPV is a leading cause of head and neck cancers, that doesn't mean alcohol and tobacco use don't still play a harmful role.

Alcohol and tobacco are "synergistic," meaning they work together, Dr. Petruzzelli says. These can make changes in the DNA that cause an infection. Free radicals from the alcohol can cause direct DNA damage, which can cause many types of cancer. But a newer fix has entered the mix, causing concern in the world of medicine.

The dangers of vaping

"It's not healthy. It's something that should not be in your body. They're chemicals and toxins that should not be in your body, and they're inhaled. So, there's toxicity everywhere they're inhaled," Dr. Petruzzelli says. "In the nose, sinuses, voice box, throat, windpipe and down into the lungs. That data is maturing as we're understanding it more, but we know that people who vape are not as healthy as people who don't. As we study it more and deeper, it will develop into higher incidence of some forms of cancer and reactive airway disease in those folks."

Ensuring head and neck cancer doesn't spread

"When we see a patient who has a head and neck cancer, especially a head and neck cancer that is lower down in the throat (voice box or swallowing tube), we need to look at the esophagus to make sure it hasn't spread there. So that's a part of our work up," Dr. Petruzzelli says.

The biggest symptom of head and neck cancer is a lump in the neck. Dr. Petruzzelli says this is something to bring up your primary care provider immediately to work quickly for a referral to OSF cancer services team if needed.

Tickles in the back of the throat, or persistent coughs that don't go away for weeks are a major concern as well.

Every week, the head and neck cancer team will meet to evaluate patients' information to come up with the best medical plan possible. Using guidelines from nationally recognized organizations like the National Cancer Institute (NCI) helps personalize the care for each patient. Surgery, radiation or a combination of both are on the table, depending on the patient.

Dr. Petruzzelli says about 50,000 patients are diagnosed with head and neck cancer every year, and because the diseases are so uncommon, they really need to be seen by experts. OSF Cancer Institute has specialists dedicated to head and neck cancer, just the same way as the other forms of cancer.

The multi-disciplinary team at OSF HealthCare follows patients every step of the way. World-class surgical expertise, along with nurses, cancer navigators, dietitians and more help patients in their cancer journey.

To connect with a primary care provider at OSF HealthCare, visit the OSF website.