

New technology promises to save lives

According to the Oral Cancer Foundation, over 8,000 people will die in our country from oral cancer in 2006. In 2000, the Surgeon General reported that 25% of tongue cancer cases occur in individuals who do not fall into the category of "high risk"; anyone can get oral cancer. If diagnosed with oral cancer, the five-year survival rate is 52%, which has not changed in 25 years.

The major reason for such a poor survival rate is that oral cancer is often not diagnosed until a significant, persistent lesion prompts a patient to ask his or her dentist or doctor about it. Unfortunately, because of the aggressive nature of oral cancers, the lesion may already have spread into the lymph system by the time it is noticed. However, when cancer is recognized early, the five-year survival rate increases to 82%. Therefore, early diagnosis saves lives!

Many dentists and dental hygienists are now doing physical oral cancer examinations routinely. The exam takes only a few minutes to perform and is often done routinely at dental check-ups. The clinician inspects the inside and outside of the mouth for unusual lumps, bumps, red spots, white spots, and ulcers. The cheeks and lips are usually rolled and palpated for masses. A very critical part of the oral cancer exam is inspection



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of the tongue. Usually the tip of the tongue is grasped with a piece of gauze and stretched forward while the clinician looks at the sides, top, and bottom of the tongue for anything suspicious. This exam has been considered to be the standard of care for many years.

Sometimes, clinicians may ask the patient to swish with a vinegar solution and then inspect the mouth with a glow-stick. This test, although beneficial, is costly and unpleasant for routine use. It works well to identify suspicious white areas, but it does not work as well on red lesions. Although this technology has been available for a few years, it has not been popular for various reasons.

Recently, a new technology has been improved by the FDA for early cancer screening. Essentially, a special light is used to inspect the soft tissues of the mouth. No rinse or dye is needed. It works on the principle that rapidly reproducing cells, such as cancer cells, do not allow the light to penetrate down to the collagen level of the skin. Healthy tissue reflects the light and appears green through the viewing filter. Suspicious lesions appear as black spots in a field of

green.

Once a lesion is discovered, either through visual inspection, by chemical fluorescence, or by diffuse reflectance spectroscopy, further tests are necessary to reach a diagnosis. Often, a painless brush biopsy is performed first for early lesions, which tells if further studies are necessary or not. If further studies are needed, then a scalpel biopsy is performed, where a part or all of the lesion is removed surgically and viewed by a pathologist under a microscope. Obtaining a diagnosis is essential for determining the appropriate treatment. Fortunately, a simple excisional biopsy or even no treatment is all that is needed for very early lesions.

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