

Head and Neck Cancer: Red Flags in the Family Practice Setting



Shamir P. Chandarana MD, MSc, FRCS(C)

Presented at the University of Calgary's Friday Morning at the Medical School Program in Calgary, Alberta on September 30, 2011.

Jack's Case

Jack, a 45-year-old non-smoker, noticed a lump in the left neck. It is nontender, and he is otherwise asymptomatic. It has persisted for six weeks, despite initial management with antibiotics. A CT scan demonstrates multiple enlarged lymph nodes in the left neck, with a small growth in the left tonsil. Biopsy of the tonsil confirms squamous cell carcinoma, with evidence of HPV. Jack is seen by a multidisciplinary team of oncologists and receives chemoradiotherapy. He has now been cancer-free for three years.

Background and Epidemiology

Head and neck cancer includes cancers of the upper aerodigestive tract (oral cavity, nasopharynx, oropharynx, larynx, hypopharynx), paranasal sinuses, salivary glands, and thyroid gland. Although cancers at different sites have different histopathological subtypes, 85% of cancers of the upper aerodigestive tract are head and neck squamous cell carcinoma (HNSCC), which will be the focus of this review.

HNSCC is the fifth most common cancer worldwide and is the seventh leading cause of cancer-related mortality.¹ In Canada, more than 4,300 people will be diagnosed this year, and nearly

1,610 will die from HNSCC.² Overall survival, taking into account all stages and anatomic subsites, is 60% at five years from diagnosis.¹

Table 1

"Red Flags" in Head and Neck Cancer

Symptoms	Signs
• Sore Throat	• Red/white patch in oral cavity
• Hoarseness	• Oral ulceration/swelling
• Stridor	• Lateral neck mass
• Difficulty or pain with swallowing	• Rapidly growing thyroid mass
• Lump in neck	• Cranial nerve palsy
• Unilateral ear pain	• Unilateral ear effusion

"Red Flag" Symptoms and Signs of HNSCC

Presentation of any of the signs or symptoms listed in Table 1 lasting for more than four weeks should warrant a referral to a specialist with expertise in head and neck oncology. Furthermore, the presence of risk factors for HNSCC, such as

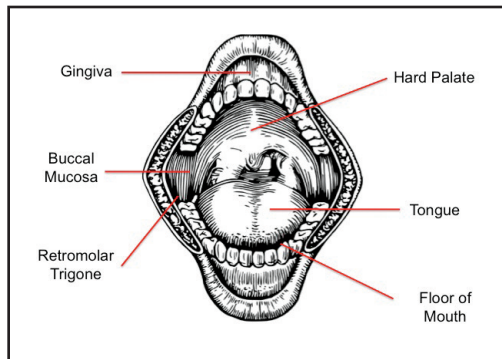


Figure 1*: Basic anatomy of the oral cavity

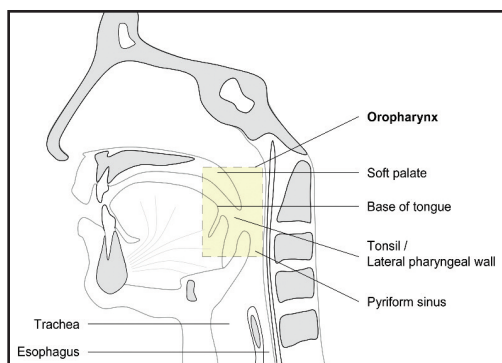


Figure 2*: Basic anatomy of the oropharynx

smoking, alcohol consumption, and family history, should heighten the suspicion for malignancy.

Because the structures of the head and neck allow one to speak, swallow, smell, and breathe, HNSCC often presents with a variety of symptoms. Symptoms vary depending on the function of the site from where the cancer arises; for example, laryngeal cancers present with hoarseness, whereas pharyngeal cancers may present with dysphagia. Many will present with an enlarged and painless lymph node in the neck.

Some symptoms of HNSCC, such as sore throat and ear pain, are non-specific and easily attributed to benign conditions. The presence and persistence of these symptoms warrant a thorough exam of the upper aerodigestive tract. While some subsites of the head and neck (oral cavity, oropharynx [see Figure 1 and Figure 2]) are

evaluable in the family practice setting, others (larynx, nasopharynx, hypopharynx) are better visualized with nasolaryngoscopy, a simple procedure that is tolerated well by patients when performed by a trained otolaryngologist. The oral cavity and oropharynx are best visualized with a headlight and two tongue depressors (one in each hand). The tongue depressors allow for manipulation of structures in the oral cavity, permitting a visualization of areas that are otherwise difficult to see, such as the floor of the mouth and the retromolar trigone (see Figure 1).

A Case Where Cancer Might Easily Be Missed

In the last 20 years, there has been a dramatic increase in human papilloma virus (HPV)-related HNSCC. More than 65% of cancers of the oropharynx (tonsil and base of tongue) are HPV-related and the incidence of this subtype is on the rise. Patients with HPV-related oropharynx cancer do not fit into the traditional profile of patients at risk for HNSCC. Patients with HPV-related HNSCC tend to be males between the ages of 30- and 50-years and non-smokers. In addition, patients most often present with enlarged lymph nodes in the neck, while the primary lesion in the oropharynx is hard to detect. Risk factors are akin to those for sexually transmitted diseases and include an increased number of lifetime sexual partners/oral sex partners and earlier age at first sexual intercourse. Compared with traditional, smoking-related HNSCC, patients with HPV-related HNSCC respond well to treatment and therefore enjoy improved survival.

Investigations

The work-up by a specialist in head and neck oncology may include the following:

Imaging

CT and MRI are frequently used to assess the extent of the disease, as well as any regional spread to adjacent lymph nodes or distant spread to the lungs. Positron emission tomography is used to help identify the location of unknown primary malignancies, as well as to evaluate for recurrence.

Histology

Ultimately, a biopsy is necessary to confirm the diagnosis. Certain subsites of the head and neck allow for biopsy in the clinic or office setting, while other subsites are easier to access under general anesthesia. Furthermore, the specialist may recommend evaluation of the primary malignancy under anesthesia to better characterize the extent, particularly when surgery is being contemplated.


Management

The current standard of care mandates that patients with HNSCC are seen by a multidisciplinary team of specialists in head and neck surgery, radiation, and medical oncology. Because treatment may impact on quality of life, the team should also include clinical nurse specialists, speech and language pathologists, dietitians, psychologists, restorative dentists, prosthodontists, and social workers.

Management of HNSCC is complex and varies based on the extent of disease and location. Surgery and radiation therapy are the two most common treatment options. In general, early stage HNSCC is treated with either surgery or radiation, while advanced stage disease is treated with a combination of surgery, radiation therapy, and chemotherapy. Treatment decisions should balance efficacy and survival with potential functional

Take-home Messages

- The main risk factors for HNSCC are smoking and alcohol consumption
- The incidence of HPV-related oropharyngeal cancer is rising rapidly and is easily missed, due to its different presentation
- Patients with HNSCC often present with hoarseness, oral ulcers, neck lymph nodes, and difficulty/pain with swallowing. Symptoms that persist for more than four weeks warrant referral to a specialist
- Treatment decisions should involve a multidisciplinary team and need to balance efficacy/survival with potential functional and quality of life outcomes
- Patients and their caregivers need significant support during and after treatment

and quality of life outcomes. While survival for HNSCC has remained stable over the last 20 years, significant advances, both in surgery and radiation therapy, have afforded patients an improved quality of life. 

References

1. Canadian Cancer Society: About Cancer: <http://www.cancer.ca/canada-wide/about%20cancer/cancer%20statistics.aspx>. Accessed: February 14, 2012.
2. Canadian Society of Otolaryngology: <http://www.entcanada.org/public2/patient14.asp>. Accessed: February 16, 2012.

Resources

1. Mehanna H, Paleri V, West CM, *et al*: Head and Neck Cancer — Part 1: Epidemiology, Presentation, and Prevention. *BMJ* 2010; 341:663–666.
2. Mehanna H, West CM, Nutting C, *et al*: Head and Neck Cancer — Part 2: Treatment and Prognostic Factors. *BMJ* 2010; 341: 721–725.

*Note: Figures 1 and 2 were provided by the Ohlson Research Initiative at the University of Calgary, Calgary, Alberta.



Dr. Shamir P. Chandarana is a Clinical Assistant Professor, Division of Otolaryngology-Head and Neck Surgery, at the University of Calgary in Calgary, Alberta.