Evaluation and Management of Adult Neck Masses

Trina M. Sheedy, MMS, PA-C

KEYWORDS

• Adult neck mass • Cervical lymphadenopathy • Primary care
• Oropharynx squamous cell carcinoma

KEY POINTS

- The incidence of malignancy is higher in adults older than 40 years old presenting with a neck mass.
- The cause of neck masses in the adult population in order of prevalence are as follows: neoplastic, infectious, and then congenital.
- Discerning pertinent questions to elicit a complete history, and comprehending the head and neck anatomy, in order to perform a meticulous examination, will be crucial skills for the primary care provider.
- Human papillomavirus–related oropharynx cancer is a well-recognized epidemic in Otolaryngology.

A new, persistent neck mass in an adult patient should be considered malignant until proven otherwise. Primary care providers and urgent care providers should keep malignancy at the top of their differential for an adult patient older than the age of 40 presenting with a neck mass, especially if that patient has particular risk factors. A thorough history and physical examination combined with a fundamental knowledge of head and neck anatomy can arm the primary care provider with all tools necessary to work up and properly diagnose a neck mass. Not all neck masses are neoplasms, but front-line providers should be familiar with the presentation and risk factors of those that are. The prognosis for those with malignancies is directly related to the stage, so early diagnosis is crucial.

ANATOMY

Before considering a differential diagnosis for a neck mass, the provider must be familiar with the anatomy of the head and neck. Anatomic landmarks are important to know, so that normal structures or viscera are not mistaken for abnormality. The

Disclosure Statement: None.
Head and Neck Surgical Oncology, Department of Otolaryngology–Head and Neck Surgery, University of California San Francisco, 1825 4th Street, 4th Floor, San Francisco, CA 94158, USA
E-mail address: Trina.Sheedy@ucsf.edu

Physician Assist Clin 3 (2018) 271–284
https://doi.org/10.1016/j.cpha.2017.11.006 **physicianassistant.theclinics.com**
2405-7991/18/

tail of the parotid gland sits posterior and inferior to the angle of the mandible. The submandibular glands sit medial to the body of the mandible and extend inferiorly into the upper neck. The hyoid bone is only rarely palpable in the lateral aspects of a thin neck. The thyroid gland sits roughly two fingerbreadths below the thyroid cartilage (Adam's apple). In the posterior neck, the transverse processes of the spine may be palpable. Cervical lymphadenopathy is the presence of abnormal, usually enlarged, lymph nodes in the neck that can represent the immune response of a transient pathologic process or worse: the progression of a malignant disease.

Cervical lymph nodes comprise one-third of the body's lymphatic system and the drainage of the head and neck follows a predictable pattern. **Fig. 1** illustrates the direction of lymphatic flow from the vertex scalp down through the neck. The final lymph drainage from the head and neck collects into the right and left subclavian veins. In the left neck, the thoracic duct, bringing lymphatic fluid from the thorax and abdomen, also joins the left subclavian vein. Primary care literature typically groups the cervical lymph nodes into triangles. The author challenges the reader to consider an otolaryngology approach, which categorizes the neck into *levels* that more accurately reflect the nodal basins relevant to the head and neck subsites. The latest proposed anatomic classification, and the system most widely used among head and neck surgeons, is the Robbins Classification, which delineates the neck into 6 levels based on lymphatic drainage.[1] **Table 1** describes the significance of each level in the neck. A basic understanding of neck levels will aid in localizing the primary site of malignant or infectious disease in the presence of cervical lymphadenopathy.

It will benefit providers to be cognizant of the head and neck anatomic levels and the relationship between relevant systems including: the skin, sinonasal cavity, upper aerodigestive tract, endocrine system, neurovascular structures, and the lymphatic system. The lymphatic system drains the skin and all mucosal surfaces from the scalp

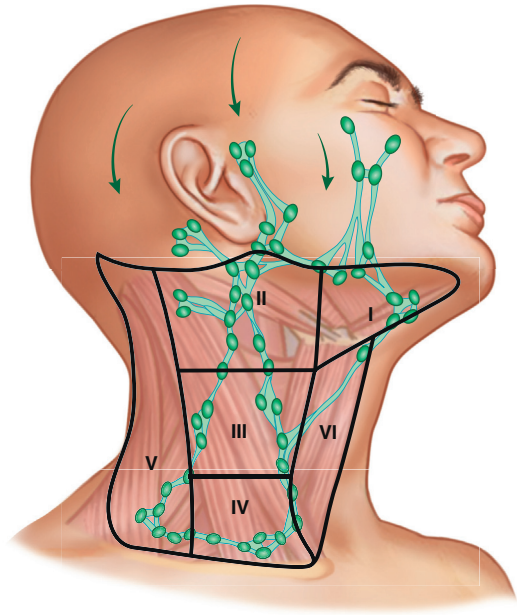

Fig. 1. Lymphatic drainage of the head and neck with delineation of Levels I-VI.