

ENT NEWS

A Service of the Ear, Nose, & Throat Center, PC

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Evaluation of the Neck Mass

A mass in the neck is a common clinical finding that presents in patients of all age groups. The differential diagnosis may be extremely broad, and although most masses are due to benign processes, malignant disease must not be overlooked. Therefore, it is important for physicians to develop a systematic approach for developing a working diagnosis and management plan for the patient.

General Considerations

The first consideration should be the patient's age group. Three main age groups need to be considered: pediatric (0 to 15 years), young adult (16-40 years) and late adult (>40 years). In general, neck masses in children are more commonly inflammatory or congenital than neoplastic. This distribution is similar in the young adult. However, the first consideration in the late adult should be neoplasia. The "rule of 80" is often applied, which states that 80% of non-thyroid neck masses in adults are neoplastic and that 80% of these masses are malignant. A neck mass in a child, on the other hand, has a 90% probability of being benign.

The next consideration should be the location of the mass. A midline location is typically benign, often being a thyroglossal duct cyst or dermoid cyst. For metastatic neck masses, their location may be the key to identification of the primary tumor, as lymph node drainage patterns are fairly reliable in the upper aerodigestive tract.

Diagnostic Steps

Evaluation of the patient with a neck mass must begin with a careful and complete history and a thorough head and neck examination. A thorough review of the developmental time course of the mass, associated symptoms, personal habits, and prior trauma, irradiation or surgery is important. Inquiries about smoking and alcohol use, fever, pain, weight loss, night sweats, and exposure to tuberculosis should be made. In the late adult patient, symptoms of dysphagia, otalgia, and/or hoarseness with a smoking history most likely represent a neoplastic process.

The examiner should not pay undue attention to the neck mass neglecting the complete examination of the head and neck. All mucosal surfaces of the nasopharynx, oropharynx, larynx and nasal cavity should be visualized by direct examination or fiberoptic visualization. The oral and pharyngeal surfaces should be digitally palpated in addition to the neck mass. Emphasis on location, mobility and consistency of the neck mass can often place the mass within a general etiologic grouping, such as vascular, salivary, nodal/inflammatory, congenital or neoplastic.

A tender, mobile mass or a high suspicion of inflammatory adenopathy with an otherwise negative examination may warrant a clinical trial of antibiotics and observation not to exceed two weeks with close follow-up.

Diagnostic studies

Fine Needle Aspiration Biopsy (FNAB): Currently, FNAB is the standard of diagnosis for neck masses and is indicated in any neck mass that is not an obvious abscess and persists following prescribed antibiotic therapies. FNAB separates inflammatory and reactive processes that usually do not require surgery from neoplastic lesions, either benign or malignant. It also may allay patient fears for malignant disease, and may help the clinician differentiate carcinoma from lymphoma, which can prevent unnecessary panendoscopy. There are no contraindications to FNAB, with the fine gauge of the needle reducing bleeding complications. Needle-track seeding of tumor is not a concern with the fine needles used today.

Ultrasonography: This study may be useful in association with guided FNAB to locate deep or difficult anatomic areas. It is sometimes useful in differentiating solid from cystic masses and congenital cysts from solid lymph nodes and glandular tumors.

CT, MRI/MRA, and PET: CT scanning of the neck has become a very helpful tool in diagnostically difficult cases. It can distinguish cystic from solid lesions, define the origin and full extent of deep, ill-defined masses, and when used with contrast can delineate vascularity or blood flow. In patients with metastatic carcinoma to the neck from an unknown primary, CT should be obtained to detect an unknown primary lesion and to help with staging purposes. Lucent changes within nodes, size larger than 1.5cm, and loss of sharpness of nodal borders are often signs of metastatic carcinoma. Contrast CT should be withheld in the suspected thyroid lesion to avoid administering iodinated material that could later interfere with radioactive-iodine imaging studies or therapy.

MRI provides much of the same information as CT. It is currently better for upper neck and skull base masses due to motion artifact on CT. With contrast it is good for vascular delineation and MRA may even substitute for arteriography in the pulsatile mass or mass with a bruit or thrill.

Use of PET scanning is still in relative infancy in the workup of head and neck masses, but is particularly helpful in the evaluation of the extent of metastatic disease and identifying unknown primary sites.

Open biopsy: If a negative/equivocal FNAB is obtained yet suspicion for malignancy persists, an open excisional biopsy of the cervical lymph node may be performed. The patient and surgeon should be prepared to proceed with a complete neck dissection depending on results of frozen sections. If the biopsy shows only inflammatory or granulomatous changes, culture of the tissue is warranted. A result of adenocarcinoma or lymphoma dictates closure of the wound and further workup and staging procedures prior to further treatment decisions.

At the Ear, Nose, and Throat Center, we are interested in helping you with the diagnosis and treatment of neck masses and are actively involved in the local head and neck tumor boards, working closely with the oncologists and radiation oncologists. Please feel free to contact us directly regarding your patients with challenging neck masses by calling 575-1212.

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their aids, have markedly improved sound quality and intelligibility for many with hearing aids. These systems work with the t-coil or telephone setting in the person's hearing aid. Now people can enjoy the same technology at home with a TV loop system. The system is available for \$299 which includes professional installation. A live demonstration is available at the Ear, Nose, and Throat Center, and can make television viewing a pleasure once again for those frustrated with TV sound quality. Call to set up an appointment for your patients today at (616) 575-1213.