

Metastatic cystic squamous cell carcinoma

Lester D.R. Thompson, MD

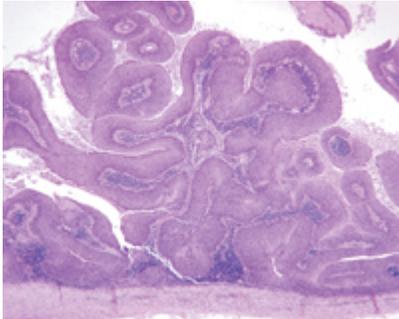


Figure 1. A cystic lymph node with a fibrous capsule (bottom) contains multiple papillary infoldings of tumor lined with a uniform squamous epithelium.

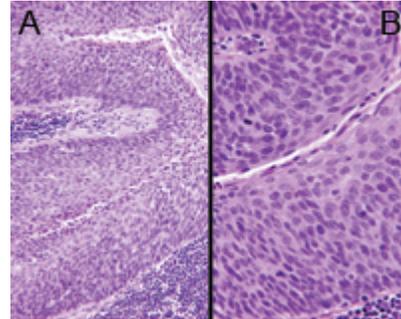


Figure 2. At intermediate magnification (A), the epithelium is bland, but it exhibits disorganization and a lack of good polarity. A higher-power view (B) shows very subtle disorganization, mitotic figures, and no maturation toward the center of the cavity.

Metastatic disease to the lymph nodes of the neck is an important clinical and pathologic consideration. When there is no known primary, the pathologist and radiologist must provide additional input to the clinician during the work-up. This installment of PATHOLOGY CLINIC focuses on cervical cystic squamous cell carcinoma (cSCC), which is commonly misdiagnosed as squamous cell carcinoma arising in a branchiogenic cyst or as a branchiogenic carcinoma.

The vast majority of patients with cSCC are men, usually in the 6th decade of life. The lesion presents as a mass in the upper to midlateral neck (jugular digastric lymph nodes) that has been present for an average of 5 months. Once the correct diagnosis is reached (discussed later), the primary tumor is generally discovered within a few weeks; however, if the search for the primary is not sufficiently aggressive, the primary may not be discovered for years, if at all. The primary tumor is usually identified in the base of the tongue, in the lingual tonsil, or in the faucial tonsil region. Tobacco and alcohol use are commonly reported in patients with cSCC.

Macroscopically, cSCCs are characteristically unilocular cystic masses that are filled with grumous, granular, thick, tenacious material. The lymph nodes are surrounded by a thick fibrous capsule. Histologically, the spaces are lined with a ribbon-type growth of transitional-type epithelium, generally of a uniform thickness and with the cells lining the inside of the cystic space (figure 1). It is not uncommon for the cells lining the cystic spaces to grow downward into the underlying lymphoid elements, creating an endophytic growth pattern; in other areas, a papillary architecture can be seen. The cells are slightly enlarged, and there is a high nuclear-to-cytoplasmic ratio, very little maturation toward the surface, and at least a few areas of loss of polarity (figure 2). The overall histologic appearance in many areas can be very bland, recapitulating the normal squamous-to-transitional type of epithelium identified in the tonsillar crypts. Occasionally, frank anaplasia is seen (figure 3).

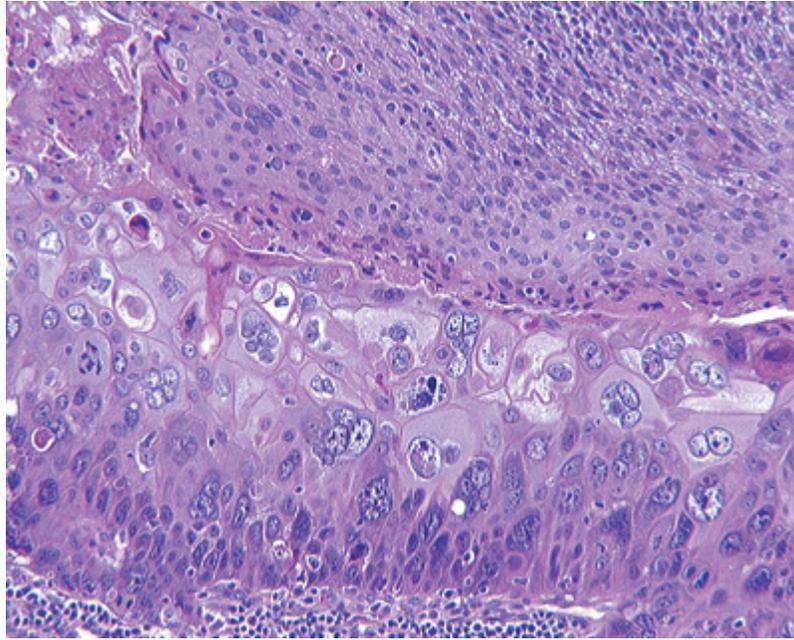


Figure 3. In some cases, a remarkably abrupt transition is seen between epithelium with a relatively "banal" appearance (top) and profound nuclear pleomorphism (bottom). Both epithelial components represent metastatic squamous cell carcinoma, even though their histologic appearance is different.

The primary tumors are often small (<0.1 cm), and they demonstrate a histologic appearance similar to that of the metastatic foci described earlier. Efforts to locate the primary should be directed toward Waldeyer's ring (specifically the lower portion). Extensive physical examination under anesthesia, screening panendoscopy (nasal, laryngeal, and esophageal), high-resolution computed tomography, and random biopsies of the upper aerodigestive tract followed by tonsillectomy (especially ipsilateral) are all used to identify the primary.

The 5-year survival rate for patients with cSCC exceeds 75%. After the initial excision of the neck mass has completely removed the metastatic disease, radiation therapy provides the best clinical outcome.

Suggested reading

Jereczek-Fossa BA, Jassem J, Orecchia R. Cervical lymph node metastases of squamous cell carcinoma from an unknown primary. *Cancer Treat Rev* 2004;30:153-64.

Thompson LD, Heffner DK. The clinical importance of cystic squamous cell carcinomas in the neck: A study of 136 cases. *Cancer* 1998;82:944-56.