Lateral cervical cyst with unsuspected metastasis from an occult tonsillar carcinoma

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ABSTRACT

Lateral cervical cysts containing squamous cell carcinoma is a diagnostic and therapeutic challenge for the clinician since they usually represent a cystic metastasis from an occult carcinoma. Various imaging modalities or even blind biopsies will help identify the primary tumour. If the primary tumour is identified, an appropriate treatment decision can be made that incorporates both the primary tumour and the cervical node. If the primary remains unidentified, the neck is treated with a modified or radical neck dissection, depending on the extent of metastatic disease, and radiation therapy is administered to Waldeyer’s ring and both necks.

We present in this paper, a case with a large cervical cyst where histology showed the presence of a poorly differentiated squamous cell carcinoma in the wall of the cyst. A diagnostic evaluation of the patient was negative. Blind biopsies of the right tonsil revealed occult squamous cell carcinoma. The patient was treated by combined chemo/radiotherapy and she is doing well nine months following excision of the mass. The relevant literature is briefly reviewed.

KEY WORDS: Lateral cervical cyst, carcinoma, tonsillar, metastases, biopsies

Case History

A 45-year-old woman presented with a tender, moveable, firm mass in the right lateral neck, which had been present for the last 3 months. Ultrasonography and computed tomography showed a cystic mass (diameter, 3 cm) just behind the right submandibular salivary gland and anterior to the jugular vein, with smooth margins. The cyst was excised with the presumed diagnosis of branchial cyst. Histology showed the presence of a poorly differentiated squamous cell carcinoma (Figure 1), which was considered as having developed in the epithelium of a branchial cyst. Diagnostic work-up included endoscopy of the upper aero-digestive tract, and head / neck Magnetic Resonance Imaging (MRI) was negative for other localization(s) of the disease. Despite this negative clinical and laboratory investigation and in order to exclude a primary in the right tonsil, blind biopsies of the right tonsil were performed which revealed occult squamous cell carcinoma (Figure 2). The patient underwent combined radiotherapy (6,000 cGy) and chemotherapy (Cisplatin + Navelbine). She is doing well nine months after excision of the mass.

Discussion

Most lateral cervical cysts in adult patients are benign lesions. Cystic masses in the lateral neck lined by malignant epithelium represent a diagnostic and therapeutic challenge for the clinician. Much attention in the literature has recently been focused on the frequent relationship between a solitary cystic cervical metastasis and an occult primary tumour in the tonsil or tongue base. It has been suggested that metastases from primary carcinomas in these sites may have a particular tendency to undergo cyst formation. Despite rigorous investigation, however, a high proportion of primary sites still remain occult. The early detection of a cystic metastasis is of crucial importance for the patient to receive the appropriate treatment with the minimum delay. We present a patient with a lateral cervical cyst, which contained unsuspected metastasis from an occult tonsillar carcinoma; the relevant literature is briefly reviewed.

Figure 1: Wall of the cyst with extended infiltration from a malignant epithelial tumour (lower part of the figure). A remnant of squamous cell epithelium and of lymphadenoid tissue is recognized (upper part of the figure) (H & E (X 25)).
About 10% of patients with lateral cervical cysts contain foci of squamous cell carcinoma. However, the incidence of malignancy is significantly higher in patients more than 40 years of age (about 25%, p< 0.0001). Preoperative diagnosis remains difficult. Clinical examination, imaging methods (including ultrasonography, CT and MRI), and fine-needle aspiration (FNA) are useful tools in the diagnostic evaluation of a patient with a cystic mass of the neck. FNA has a proven role in the diagnosis of solid masses in the neck, without causing violation of the neck. However, its usefulness in the diagnosis of cystic masses of the neck is less certain. Previous studies of patients with malignant cervical cysts have reported relatively poor results for FNA in the detection of malignancy, with reported sensitivities ranging from 33% to 50%. However, these previous reports included a relatively small number of patients (range, 3–8 patients). Interestingly, in a recent study comprising a large series (n = 17) of patients presenting with cystic metastases who underwent FNA, the method has been found to be an invaluable tool in the assessment and management of these patients, having a 73% sensitivity in the diagnosis of malignancy among all patients with cystic metastases and a 60% sensitivity in cases presenting with features of branchial cysts. This recent study supports the recommendation that all patients— and particularly older patients (i.e. > 40 years)— with cervical cysts should undergo FNA. The clinician, however, should be aware that a negative FNA result may be misleading, because of hypocellularity of the cyst fluid.

Unfortunately, despite the availability of sophisticated diagnostic methods, these are frequently unreliable to exclude the presence of malignancy within a cystic mass in the neck. Therefore, cyst biopsy should be performed to exclude malignancy, especially in patients more than 40 years of age. Frozen section at the time of cyst excision may be performed. If a squamous cell carcinoma is diagnosed within the cyst, the most probable primary can be expected in the nasopharynx, tonsil, or tongue base (Waldayer’s ring). These patients should undergo careful clinical examination with panendoscopy. In the absence of overt anomalies, a CT or MRI of the head and neck is a useful diagnostic step. Positron emission tomography (PET) is a reliable method to detect tumours that may be considered in the preoperative evaluation of a patient with biopsy-proven head and neck cancer. The patient should also be scheduled for an exam under anaesthesia in the operating room for the purpose of obtaining biopsies. However, how to perform these biopsies remains debatable. One approach advocates “blind” biopsies of the ipsilateral nasopharynx, tonsil, base of tongue, pyriform sinus, and even postericoid area. Alternatively, only sites of mucosal abnormalities, however minor, are biopsied. If the primary tumour is identified, an appropriate treatment decision can be made that incorporates both the primary tumour and the cervical node. An ipsilateral tonsillectomy biopsy is also recommended. If the primary remains unidentified, the neck is treated with a modified or radical neck dissection, depending on the extent of metastatic disease, and radiation therapy is administered to Waldayer’s ring and neck. Before proceeding to neck dissection, a “second-look” panendoscopy and additional biopsies should be considered. It should be noted that these cystic metastases are usually solitary, and if additional surgery in the form of a neck dissection is performed (only for metastatic foci that are greater than 3 cm or in multiple lymph nodes), it is recommended that the dissection be as limited and conservative as is feasible. External beam and/or interstitial radiation have been used for the curative treatment of carcinoma of the oropharynx. Cancer of the tonsillar fossa responds best to radiotherapy. Surgical excision of all but the smallest palatal and tonsillar lesions is generally inadequate. If the primary is proven to have arisen in the nasopharynx, first-line therapy would consist of radiotherapy of the primary tumour and draining lymph nodes. Surgical resection, even of small tumours, is of limited benefit because of the associated high morbidity.

References


Figure 2: Biopsy of tonsil (H & E [X 100]).

Lower part. Neoplastic cells with features of squamous cell carcinoma.
Pavlakis et al: Lateral cervical cyst with unsuspected metastasis


Interesting Images

Skin Branding

A 36-year-old tribal man presented with progressive weakness and wasting of all four limbs of one-year duration. Examination showed diffuse fasciculations. Sensory examination was normal. Deep tendon reflexes were absent in the upper limbs and exaggerated in the lower limbs. Clinical suspicion of amyotrophic lateral sclerosis was confirmed by electromyography. Examination also showed multiple linear scars over the forearms (Figure 1), arm and upper part of the back (Figure 2). On enquiry, it was found that the patient was taken to a faith-healer, who had produced these burns with hot iron rods. Branding refers to a traditional practice of producing ‘therapeutic’ burns with hot iron rods or metallic objects over the skin in order to treat various conditions without any scientific evidence.

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