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CYSTIC METASTATIC SQUAMOUS CELL CARCINOMA NECK: A RARE CASE REPORT

Pathology

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ABSTRACT

In the past, cystic squamous cell carcinoma (SCC) in the head and neck region was erroneously diagnosed as branchiogenic carcinoma. Often it is the metastatic SCC to the regional lymph nodes. Most of them present as solid masses in the neck, sometimes they present as cystic masses and may be confused with branchial cysts. However, it has been observed that most adults presenting with cystic masses in neck have metastatic SCC. Fine needle aspiration cytology (FNAC) has been very helpful in pre-evaluation of cystic masses of neck. Here we present a case of a 61yr old male diagnosed as cystic SCC probably arising in the branchial cyst neck on FNAC. Later, after thorough clinical examination followed by biopsy, he was diagnosed to have SCC of soft palate, which was metastasizing in the cervical lymph nodes.

KEYWORDS

Cystic squamous cell carcinoma, malignancy in branchial cyst neck, tobacco chewing and squamous cell carcinoma soft palate

INTRODUCTION

Rarely primary cystic squamous cell carcinoma (SCC) of the neck may be of branchiogenic in origin. But the development of carcinoma in a branchial cleft cyst is a controversial subject [(1)]. In a recent study, it has been shown that the cystic metastasis of SCC is commonly found from the primary SCC of palatine or lingual tonsil and rarely in larynx[(2)]. Here we document a case of the neck mass which was initially diagnosed as cystic SCC on FNAC, probably arising in the branchial cyst, but later on confirmed as metastatic cystic SCC from soft palate.

CASE STUDY

A 61-year-old male patient presented to ENT outpatient department (OPD) of a tertiary care hospital in Northern India with the chief complaints of right lower neck mass since 2 months and difficulty in deglutition from 10 days only. He also complained of hoarseness of voice. He was a non-smoker but had been tobacco chewing for the past 20yrs.

His physical examination revealed a palpable, non pulsatile, partially cystic and partially solid mass in right posterior triangle of neck (Fig.1a). He was referred to cytopathology laboratory for fine aspiration cytology (FNAC) by the clinician. On FNAC, about 10 ml of pale yellow fluid was aspirated from the cystic area. A repeat procedure was done from the solid area and blood mixed material was aspirated. The smears were stained with H&E, MGG and Pap. Microscopic examination of the smears showed pleomorphic, hyper-chromatic atypical squamous cells arranged in loose sheets as well as singly with pink cytoplasm and condensed nuclear chromatin suggestive of keratinizing squamous cell carcinoma (Fig.1b). Further investigations for primary site were also advised.

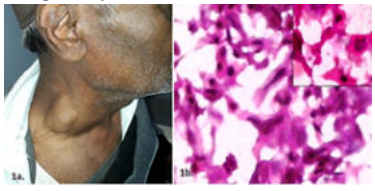

Figure 1(a,b). (1a) Swelling in right side neck. (1b) FNAC smear showing pleomorphic, hyper-chromatic atypical squamous cells (H&E 40X) with condensed nuclear chromatin (inset; Pap 100X).

The patient was investigated for his complaints of hoarseness of voice and difficulty in deglutination of recent origin. On laryngoscopic examination an ulcerated area on soft palate and uvula (Fig 2a) was noticed. A biopsy from soft palate and tonsillar region was taken and submitted for histopathological examination.

Paraffin sections were prepared and stained with H&E stain for microscopic examination, which revealed that biopsy piece was lined by atypical acanthotic stratified squamous epithelium. The underlying tissue was infiltrated by pleomorphic hyperchromatic squamous cells with abundant pink cytoplasm and hyper-chromatic nuclei. These cells were arranged in sheets and lobules with keratin pearl formation (Fig2b). Large areas of tumour necrosis were also present. Hence a final diagnosis of invasive keratinising squamous cell carcinoma metastasizing to the cervical lymph nodes as cystic squamous cell carcinoma was established.

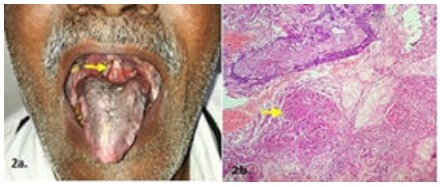

Figure 2(a,b). (2a) Ulcerated area on soft palate and uvula. (2b) Section showing squamous cell carcinoma with keratin pearl formation (H&E 10X).

DISCUSSIONS

Historically, lateral neck cystic masses were commonly judged to be branchial cleft cysts and the malignant lesions of the lateral aspect of the neck may arise from remnants of brachial cleft. These lesions were labelled as "branchiogenic carcinomas" and no attempt was made to search for the primary tumour site. In 1950, Hayes Martin challenged this preposition and suggested that a thorough search for primary tumour should be done. They also set forward certain criteria that should be met for the diagnosis of branchiogenic carcinomas[(3)]. Cystic change in metastatic lymph nodes occurs in certain types of tumours and it is an unexplained phenomenon, which may be site specific that mostly happens in the lymph nodes of head and neck region. Very rarely, cystic metastasis have been encountered in other tumours such as serous papillary carcinoma of the ovary or endometrium and malignant melanoma [(4)]. Gourin and Johnson found no examples that met these criteria in their series of 121 patients with an initial diagnosis of lateral cervical cyst[(5)], and Neel and Pemberton found no such cases in 319 patients with lateral neck cysts[(6)]. Thus, it is now accepted that branchial cleft carcinomas are either non-existent or exceedingly rare. Metastatic cystic SCC in cervical lymph nodes is now considered as a typical presentation of SCC arising in the oro-nasopharynx region.[(7)] The mechanism of cyst formation in cystic metastases has not been fully elucidated. The phenomenon of cystic nodal metastasis has been postulated to occur secondary to pseudocystic change resulting from spontaneous degradation of keratin and cellular debris within the carcinomatous lymph node deposit[(8)].

It was suggested that cases of cystic squamous carcinoma metastatic to cervical lymph nodes may be determined by cytological examination on fine needle aspirates (FNA). The neck swelling in the present case, though was partly solid and partly cystic on palpation, on FNAC about 10 ml brownish fluid was aspirated, which supported the clinical

diagnosis to be as branchial cyst. Cytosmears were positive for keratinizing squamous cell carcinoma. Fine needle aspiration cytology has been shown to be a reliable procedure in the determination of malignancy within the cyst. In the present case also FNAC diagnosis was cystic SCC. As the patient had history of hoarseness of voice and difficulty in deglutition, tonsillar and oropharynx region was thoroughly examined clinically. On laryngoscopic examination an ulcer was detected from which biopsy was taken and submitted for histopathological examination, which confirmed the primary site in the soft palate.

Another indicator is the age of the patient, which helps in determining whether the mass is malignant or not. In patients with age more than 40yrs have shown to have malignant cystic masses. Also cystic SCC is generally not associated with the usual risk factors of smoking and alcohol abuse [9]. The present case was 61 years old man and the history of long standing tobacco chewing was evident, in contrast to the belief that the cystic SCC is not associated with risk factor of tobacco intake.

CONCLUSIONS

The patients above the age of 40yrs presenting with cystic mass in neck should be initially considered to have cancer until proven otherwise. FNAC is the most economical, convenient and rapid diagnostic tool in making the initial diagnosis of malignancy. If found malignant, thorough investigations for the primary site, depending upon the clinical symptoms should be done for finding out the primary site. A biopsy from Waldeyer's ring and tonsil may be considered as part of diagnostic workup for proper management of the patient.

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