



Neck Cellulitis an Unusual Presentation of Laryngeal Carcinoma: A Case Report

B. Mas Ayu^{1*}, S. H. Tan¹, A. B. Zulkiflee¹ and G. Sakina¹

¹Department of Otorhinolaryngology, University of Malaya Medical Centre, Lembah Pantai, 59100, Kuala Lumpur, Malaysia.

Authors' contributions

This work was carried out in collaboration among all authors. Author BMA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors SHT and ABZ managed the analyses of the study. Author GS managed the literature searches. All authors read and approved the final manuscript.

Article Information

Editor(s):

(1) Dr. José Francisco de Sales Chagas, Sao Leopoldo Mandic Medical School, Brasil.

Reviewers:

(1) Steve Carlan, USA.

(2) Theophilus Adjeso, Ghana.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/57149>

Received 09 March 2020

Accepted 14 May 2020

Published 26 May 2020

Case Study

ABSTRACT

Laryngeal carcinoma is a common malignancy most commonly presented with hoarseness and impending airway obstruction. However, the diagnosis of laryngeal carcinoma with presentation of neck cellulitis is a rare presentation.

Here we report a case of 78 years old man with history of painful left neck swelling extending to the left chest which was initially treated as extensive left neck abscess extending to the left chest wall. A diagnosis of laryngeal carcinoma was made following incision and drainage of the left neck swelling and biopsy of the abnormal tracheal cartilage which revealed squamous cell carcinoma. Here we reported an uncommon presentation of laryngeal carcinoma.

Keywords: Laryngeal carcinoma; neck swelling; neck abscess; neck cellulitis.

1. INTRODUCTION

Primary laryngeal carcinoma is estimated to comprise 2% to 5% of all malignancies

worldwide. In primary laryngeal carcinoma, about 99% or more are primary squamous cell carcinomas [1]. The common presentations of laryngeal carcinoma include hoarseness with

*Corresponding author: E-mail: masayu86@yahoo.com;

associated symptoms of dysphagia, insomnia, mouth symptoms, otalgia or recurrent dyspnea [2].

The guidelines from National Institute for Health and Care Excellence (NICE) 2015 recommend patient aged 45 and above with symptoms of unexplained persistent hoarseness or unexplained lump in the neck to receive referral appointment within 2 weeks for suspected laryngeal cancer [3].

To our best knowledge, there are few studies reported on deep neck infections as initial presentations of head and neck cancer [4-7]. Here, we reported a case of laryngeal carcinoma presenting as neck cellulitis.

2. CASE REPORT

A 78 years old gentleman with long standing diabetes mellitus and hypertension, with strong family history of malignancy was initially admitted to medical ward for community acquired pneumonia with left parapneumonic effusion. He presented with a week history of left sided chest pain associated with pain on his left shoulder as well as left neck swelling. He denied symptoms of hoarseness or difficulty to breathe. Patient had history laryngeal pharyngeal reflux 1 year prior to presentation and was treated with oral proton pump inhibitor. Additional history from family members revealed significant history of hoarseness which was neglected by patient.

Physical examinations showed diffuse left neck swelling over left sternocleidomastoid region, firm, erythematous and tender on palpation. There was also diffuse swelling on left upper chest until above the nipple line which appears to be erythematous, firm and tender on palpations. Bedside endoscopic examination noted edematous bilateral false cords obscuring the view of the true cords. No obvious mass was seen in the supralaryngeal structure.

Computed tomography was performed which showed multiloculated enhancing collections in the left sternocleidomastoid (SCM) extending from C5 to T2 measuring 4.4x4.4x3.6 cm causing compression to the trachea and right midline shift (Figs. 1 and 2). There were also intramuscular collections involving the pectoralis major muscles with bony erosions over the medial part of left

clavicle and first rib. Moderate left pleural effusion was present with adjacent collapse consolidation.

Incision and drainage of left neck swelling and open tracheostomy was performed in view of radiological suspicion of collection/abscess. Intraoperatively, the left sternocleidomastoid muscle (SCM) appeared bulky and firm with hemoserous fluid and old blood intramuscularly. However, there was no pus discharge. There was a diffuse hard mass adhering to the left thyroid cartilage with distortion of normal anatomy of the larynx. Tracheal cartilage was deviated to the right due to mass effect. The mass was biopsied for histopathological examination. Direct laryngoscopy was not performed due to intraoperative deterioration of patient condition.

The histopathological examination biopsy of the thyroid cartilage and left SCM revealed moderately differentiated squamous cell carcinoma (SCC).

Multidisciplinary discussion was done and the diagnosis of SCC most likely extension from primary laryngeal carcinoma was made since it was more likely than primary thyroid where SCC is rare. Furthermore, in view of the distortion of laryngeal structures from the CT (Fig. 1) the diagnosis made for this case was laryngeal carcinoma.

Post operatively, patient condition deteriorated due to overwhelming sepsis and succumbed to death after a week.

3. DISCUSSION

In a recent study by Shephard et al, recognising laryngeal carcinoma in primary care, the presentation listed includes hoarseness, sorethroat, recurrent dyspnoea, otalgia, dysphagia, insomnia [2]. Symptoms such as neck lumps as presentations of head and neck cancer was reported in a study by Dolan et al. [8]. The commonest symptoms of cancer in the head and neck includes local pain, neck mass, voice change, dysphagia, weight loss, referred pain, bleeding, stridor and cranial nerve dysfunctions [8]. However, the commonest combinations of two symptoms associated with supraglottic tumour includes voice change and dysphagia [8].

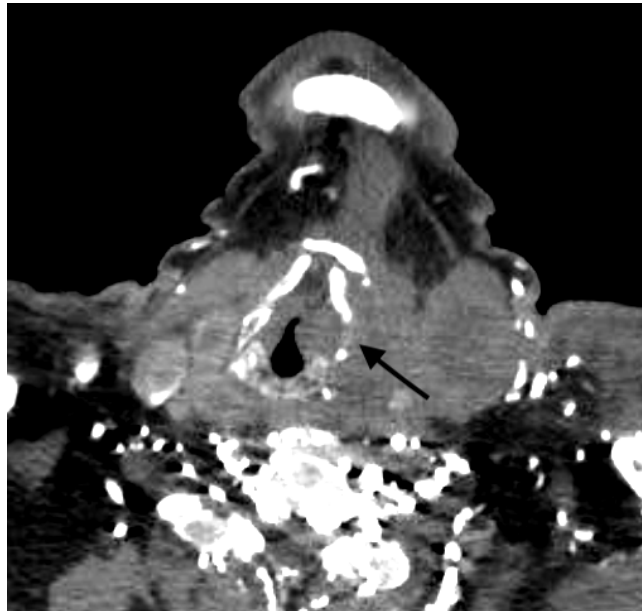


Fig. 1. Axial, contrast enhanced computed tomography showing extension of the mass from anterior commissure to posterior third of the vocal cord involving paraglottic and preglottic region. There is erosion of the thyroid cartilage posteriorly involving the paracartilaginous region.



Fig. 2. Coronal, contrast enhanced computed tomography showing a) thyroid cartilage erosion with mass effect causing narrowing of airway. b) left SCM multiloculated enhancing collection with no clear fat plane with adjacent left thyroid lobe. c) bony erosion of medial part of left clavicle. d) bony erosion of manubrium sternum and first rib. e) diffuse subcutaneous edema at left chest

Presentations of lymph node metastasis as deep neck abscess or cervical cellulitis is uncommon and maybe secondary to the relatively effective blood supply to the head and neck area [9]. It has been hypothesized that infected ulcer from the primary tumour is a probable source of the abscess forming bacteria, which then drain into the lymph nodes [10].

There are several case reports on unusual presentations of laryngeal carcinoma. In the case described by Pezier et al, the initial presentations of patient was stridor caused by the endolaryngeal tumour and extraluminal compression from subcutaneous emphysema which was due to the perforation of tumour through the laryngeal cartilage [11].

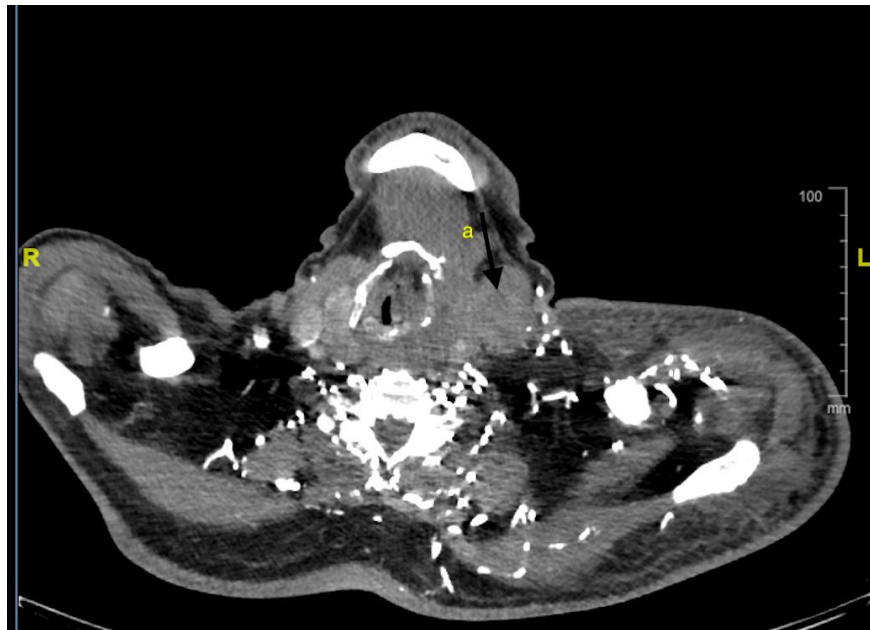


Fig. 3. Axial, contrast enhanced computed tomography showing a) multiloculated enhancing collections in the left SCM

Another case reported by Ereno et al, presentation of atypical carcinoids of larynx presented with scalp nodule [12]. The scalp nodule was a metastases from the laryngeal tumour [12].

Study by Lin et al, 4 out of 81 patients with deep neck infections was diagnosed with head and neck cancer [4]. The prevalence of head and neck cancer with initial manifestation of deep neck infections was found to increase in patient aged more than 40 years 4. In another study by Wang et al, in 301 patients with deep neck infections [7], were identified diagnosed with primary head and neck cancer with initial presentation as deep neck abscess [5]. The primary origin of the cancer was found to be 2 from nasopharynx, 2 from oropharynx and 1 patient each from hypopharynx, parotid and maxillary sinus [5].

Lee et al reported 2 cases of supraglottic squamous cell carcinoma with initial presentations of abscess in the metastatic nodes which both cases age more than 60 years old [6]. He also reported a case of pyriform fossa SCC presenting as cervical cellulitis [6].

In the available reports that we identified, laryngeal carcinoma can present with neck

abscess [6,11,13,14], only one case reported as cervical cellulitis [6].

The management of neck abscess associated with head and neck malignancy includes appropriate management of the abscess as well as definitive treatment of the tumour without delaying the oncological intervention [6]. Nevertheless, in view of massive local infiltration of tumour cells facilitated by the abscess and the extensive nature of the tumour, the long term prognosis for these cases remains poor [6]. Despite these conditions, our patient had limited choice of treatment considering his multiple uncontrolled comorbidities, late presentations and poor general conditions.

4. CONCLUSION

To our knowledge, presentation of laryngeal carcinoma as neck cellulitis is uncommon. Pertaining to this case, the diagnosis of carcinoma of larynx was not the provisional diagnosis due to its odd presentation. As this patient was elderly with multiple comorbid of diabetes mellitus and hypertension, deep neck infections are a more common diagnosis as compared to infected head and neck tumour. Thus, as per recommendation by NICE guideline, clinicians should have high clinical suspicion and

vigilant in treating and managing patient with head and neck malignancy risk factor.

CONSENT

Informed consent was obtained from patient family members prior to reporting.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Fu YS, Wenig BM, Abemayor E, Wenig BL. Head and neck pathology. Philadelphia, Pa: Churchill-Livingstone. 2001:330–455.
2. Shephard, Elizabeth A, Molly AL Parkinson, William T. Hamilton. Recognising laryngeal cancer in primary care: A large case–control study using electronic records. Br J Gen Pract 69.679. 2019;e127-e133.
3. National Institute for Health and Care Excellence. Suspected cancer: recognition and referral. London: NICE; 2015. Available: <https://www.nice.org.uk/guidance/NG12> (Accessed 14 Dec 2018)
4. Lin, Yuan-Yung, et al. Head and neck cancers manifested as deep neck infection. European Archives of Oto-Rhino-Laryngology. 2012;269(2):585-590.
5. Wang, Cheng-Ping, Jenq-Yuh Ko, and Pei-Jen Lou. Deep neck infection as the main initial presentation of primary head and neck cancer. The Journal of Laryngology & Otology. 2006;120(4):305-309.
6. Lee WC, Walsh RM, Tse A. Squamous cell carcinoma of the pharynx and larynx presenting as a neck abscess or cellulitis. The Journal of Laryngology & Otology. 1996;110(9):893-895.
7. Chen, Wei-Ting, et al. Deep neck abscess as the predominant initial presentation of carcinoma of unknown primary: A case report. Oncology Letters. 2014;7(4):1297-1299.
8. Dolan, Robert W, Charles W. Vaughan, Fuleihan Nabil. Symptoms in early head and neck cancer: an inadequate indicator. Otolaryngology—Head and Neck Surgery. 1998;119(5):463-467.
9. Thompson Hilda Y, Paul Fulmer R, Vicki J. Schnadig. Metastatic squamous cell carcinoma of the tonsil presenting as multiple cystic neck masses. Report of a case with fine needle aspiration findings. Acta Cytologica. 1994;38(4):605-607.
10. Ross Harry. Metastatic squamous carcinoma in lymph nodes with abscess formation. Australian and New Zealand Journal of Surgery. 1965;35(2):103-107.
11. Pézier T, et al. Cervical emphysema: An unusual presentation of laryngeal cancer. The Journal of Laryngology & Otology. 2014;128(3):299-301.
12. Ereño, Cosme, Jose I. Lopez, Jose M. Sanchez. Atypical carcinoid of larynx: Presentation with scalp metastases. The Journal of Laryngology & Otology. 1997; 111(1): 89-91.
13. Hermans, Robert, et al. Laryngeal squamous cell carcinoma presenting as a prelaryngeal neck abscess: report of two cases. European Radiology. 2001;11(12): 2479-2483.
14. Nakagawa Hideki, et al. Laryngeal carcinoma presenting as a large anterior neck abscess. Auris Nasus Larynx. 2007; 34(2):249-251.

© 2020 Ayu et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/57149>