

## Carcinosarcoma of the Larynx: A Case Report from Aden

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### Abstract

**Introduction:** Carcinosarcoma is a very rare lesion reported in many organs including larynx. The larynx appears to be highly unusual site, only a few cases have been described in the literature. Carcinosarcoma is a mixed tumour. It is composed of both malignant epithelial and mesenchymal elements.

**Case report:** This is a report of 55 years old male, who presented with complaints of hoarseness of voice and difficulty in swallowing who came to Ear, Nose and Throat outpatient department in Al-Gamhouria Teaching Hospital, Aden. The growth was pedunculated arising from left vocal cord. Diagnosis was confirmed by histopathology as a case of carcinosarcoma of the left vocal cord.

**Keywords:** Carcinoma, Sarcoma, larynx.

### دراسة حالة لساركومه سرطانية في الحنجرة في عدن

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### ملخص الدراسة

الساركومه السرطانية هي آفة نادرة جداً تم تسجيل ظهورها في العديد من الأعضاء بما في ذلك الحنجرة. يبدو أن الحنجرة موقع غير اعتيادي للغاية لظهورها حيث انه تم وصف حالات قليلة فقط في المصادر، وهي ورم مختلط يتألف من سرطان الخلايا الطلائية وسرطان الخلايا الرخوة ولحمة متوسطة.

**تقرير حالة:** سجلت حالة لرجل يبلغ من العمر 55 عامًا يعاني من بحة في الصوت وصعوبة في البلع في عيادة الأنف والأذن والحنجرة الخارجية في مستشفى الجمهورية التعليمي في عدن، حيث ظهر النمو السرطاني من الحبل الصوتي الأيسر وتم تأكيد التشخيص من خلال التشريح المرضي كحالة ورم سرطاني خبيث للحبل الصوتي الأيسر.  
**الكلمات المفتاحية:** سرطان، ساركوما الحنجرة.

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## Introduction

**C**arcinosarcomas are rare malignant tumors comprising both carcinomatous and sarcomatous components [1]. Carcinosarcomas have drawn the attention of biologists and clinicians alike since their first description by Virchow in 1863 [2]. Carcinosarcoma has been reported under a wide variety of pathological names, including carcinosarcoma, spindle cell carcinoma, Lane tumors (squamous cell carcinoma with pseudosarcoma), pleomorphic carcinoma, metaplastic carcinoma, polypoid squamous cell carcinoma, pseudocarcinosarcoma, and carcinoma with pseudosarcoma [3].

Carcinosarcoma can appear in various organs, but its occurrence in the head and neck, is extremely rare [4]. Larynx appears to be highly unusual site [5], have been occasionally described in the literature [6,7], it is a mixed malignant tumor represents only 2%-3% of throat cancers [1,8,9].

Herein is a report of a patient who came to Ear, Nose and Throat outpatient department in Al-Gamhouria Teaching Hospital, Aden, with complaints of hoarseness of voice and difficulty in swallowing.

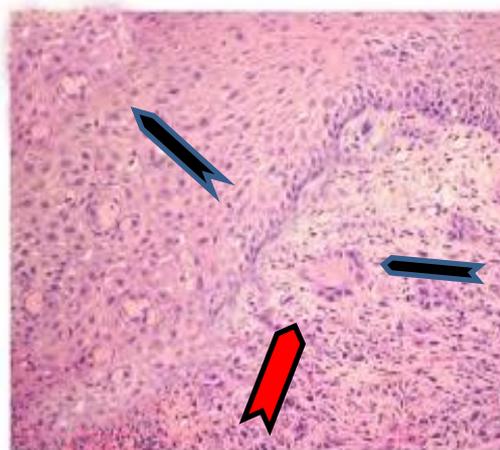
## Case report

This is a report for 55 years old male, who presented with complaints of hoarseness of voice, and difficulty in swallowing to ENT outpatient department. General physical examination of the patient was normal. Basic haematological

investigations, liver function tests and renal function tests were normal.

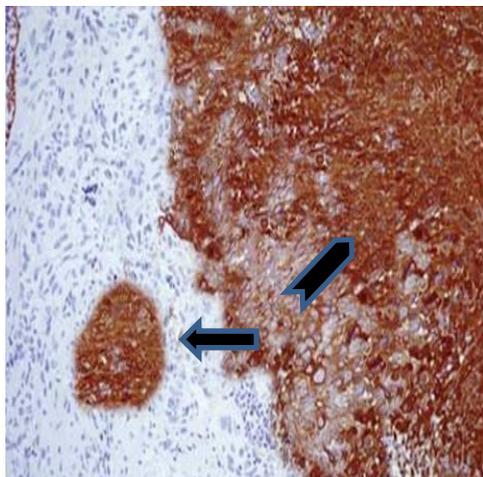
Direct laryngoscopy revealed polypoid pedunculated growth on anterior third of left vocal cord without anterior commissure involvement.

Biopsy was taken and sent to the pathology department in 10% formalin for histopathologic examination. Gross findings showed single white soft tissue mass measuring 1.x1x0.5cm. External surface was nodular and cut section showed grey white appearance. Microscopic examination showed two histologic patterns within the tumor; epithelial cells and mesenchymal cells, the epithelial cells are squamous with pleomorphic vesicular nuclei and variable keratinization, the mitotic activities are high. Mesenchymal "Sarcomatous elements" with pleomorphic, spindle cells (Figure 1).



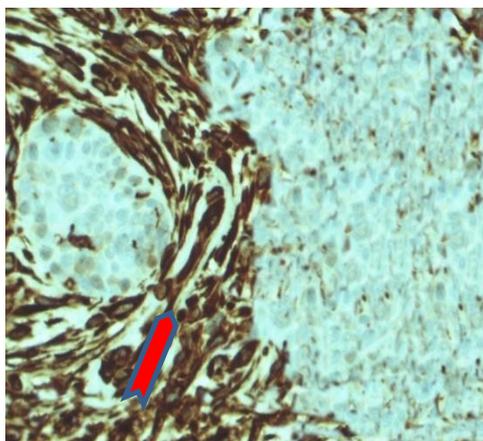
**Figure 1:** The Lesion Showed Two Histologic Patterns Within the Primary Tumor. The Black Arrow is Squamous Cells Carcinoma and the Red Arrow is the Sarcomatous Component

Immunohistochemical study shows that the epithelial cells show a strong positive reaction to cytokeratin (CK) (Figure 2).



**Figure 2:** Immunohistochemistry: A Strongly Positive Expression for Cytokeratins (CK) by Epithelial Neoplastic Cells.

On the other hand, the sarcomatous element shows strong positive reaction to vimentin and negative for cytokeratin as seen in Figure 3.



**Figure 3:** Immunohistochemistry: A Strongly Positive Reaction for Vimentin by Mesenchymal Cell in the Tumour

Immunohistochemical and morphological studies are in favor of a carcinosarcoma of larynx. The

patient was clinically diagnosed as T1N0M0, stage I. (Tumor size, lymph node involvement, metastasis).

During a period of one-year follow-up of the patient, there was no evidence of tumour recurrence.

## Discussion

The most common sites of primary laryngeal carcinosarcomas are the vocal cords, followed by the glottis. The laryngeal carcinosarcoma has similar clinical presentation like other laryngeal carcinomas [11]. Almost all patients experienced hoarseness and some patients presented with shortness of breath as the main symptom due to laryngeal obstruction, the associated clinical manifestation included foreign body sensation in the throat, sore throat, and neck masses [ 3,5].

Although the exact cause is not known, previous studies suggested that alcohol addiction, smoking, and radiation exposure are more likely the major risk factors for laryngeal carcinosarcoma, and approximately 87% and 48% of these patients had a history of smoking and drinking, respectively [9,12]. It is more common in males as compared to females (12:1 ratio), and is usually seen in the 6th and 7th decades of life [10].

The microscopic features of carcinosarcoma show malignant epithelial and stromal components, both components are admixed. Immunohistochemical studies shows that the epithelial component was positive to cytokeratin, and mesenchmal component was positive

to vimentin in addition to positivity for other markers like S-100, actin and desmin. Most of the cases of laryngeal carcinosarcoma have been treated with laryngectomy which is the main treatment for primary laryngeal carcinosarcoma [13].

The prognosis of carcinosarcoma is controversial and it is reported to be worse than squamous cell carcinoma [12]. The most important prognostic factor is the nodal metastasis. The main characteristics of this type of tumor are the tendency to metastasize to the other side of the neck. [13]. The negative factors associated with poor prognosis of laryngeal carcinosarcoma patients include tumor T-stage, tumor location, vocal cord movement, and history of head and neck radiation therapy, as well as whether necrosis appeared [9].

### Conclusion

Primary laryngeal carcinosarcoma is a very rare malignancy. We report the case due to its rarity of presentation in the larynx. It was without any evidence of tumor recurrence after one year of follow-up.

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