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# Laryngeal Mucosa-Associated Lymphoid Tissue Lymphoma

**Amadan Hassan***

*Division of Otolaryngology-Head and Neck Surgery, University of Wisconsin, United States*

## Abstract

The most frequent cause of laryngeal aspergillosis in immunocompromised hosts is secondary invasion from the lungs and tracheobronchial tree. However, there have only been a few cases of primary aspergillosis of the larynx reported in the past fifty years. We describe the example of a 73-year-old woman who complained of on-going hoarseness. She is a non-smoker who has been treated with nebulized tobramycin, inhaled and oral corticosteroids, bronchodilators, and other medications for her history of asthma and chronic bronchiectasis. It was determined via direct laryngoscopy and vocal cord stripping that the patient had invasive aspergillosis with no other symptoms.

With oral voriconazole, the patient was successfully treated and showed no symptoms of recurrence. To the best of our knowledge, no reference of inhaled antibiotics producing this uncommon presentation has been made in the literature, despite the fact that a number of significant risk factors for the development of primary aspergillosis of the larynx have been documented. Therefore, we emphasise the role of inhaled tobramycin as a special initiator of this unusual appearance.

Though uncommon, laryngeal trauma is a serious and sometimes fatal injury. Since the clinical appearance of acute laryngeal trauma varies depending on the location, intensity, and mode of injury, rapid diagnosis and treatment are required. There are provided two case studies: (1) Case history A describes a 53-year-old man who fractured the mid anterior thyroid cartilage and both aspects of the cricoid cartilage after a motor vehicle accident; however, this patient was asymptomatic from the above fractures; and (2) Case history B describes a 41-year-old man who suffered trauma to the chest, neck, and left arm after being struck by a large lead pipe, which fractured the left aspect of the cricoid cartilage; this patient was symptom. Symptomatology may be connected to the type of acute laryngeal injury rather than the severity of the injury as well as the mode of injury. Emergency department physicians and trauma radiologists should be able to identify acute laryngeal trauma. Acute laryngeal trauma may not require unnecessary expert consultations and long-term problems if it is identified and treated quickly.

**Keywords:** Lymphoma; Larynx; Lymphoma; Stomach neoplasms; Disease management; Local therapy; Neck; Rituximab; Skin; Thyroid

## Introduction

Trauma to the larynx is uncommon but possibly fatal. There are two types of laryngeal trauma: penetrating and blunt, and supraglottic, glottic, and infraglottic. Even after small trauma, laryngeal injuries can heal with fibrous union, deformity, and altered laryngeal function. Loss of typical anatomic landmarks, discomfort, crepitus, soft tissue emphysema, dysphonia, aphonic, laryngeal blockage, dyspnea, stridor, hoarseness, neck pain, haemoptysis, dysphagia, and odynophagia are all characteristics of laryngeal trauma [1]. With the external auditory canal, Para nasal sinuses, and orbit being the most often impacted areas, Aspergillus can nonetheless induce localized/primary illness in persons who are otherwise reasonably healthy. When compared to the prevalence of primary aspergillosis affecting other sites in the head and neck, laryngopharyngitis is incredibly uncommon [2]. As a result, this particular presentation could first be confused for vocal fold cancer. Although the precise cause of primary laryngeal aspergillosis is yet unknown, it is most likely complex. A uncommon benign mesenchyme tumour called an angiomyolipoma is made up of different ratios of mature lipoid tissue, smooth muscle fibres, and capillaries with thick walls. Women are most frequently affected by it. Renal angiomyolipoma is the most prevalent type of angiomyolipoma. The asymptomatic lesion, which is typically found by accident, is also present in systemic disorders like tuberous sclerosis. While tuberous sclerosis syndrome is present in 50% of instances of renal angiomyolipoma, extra renal occurrences are sporadic [3]. The tuberous sclerosis syndrome includes skin abnormalities including adenoma sebaceous, epilepsy, and mental impairment. Similar to previous laryngeal angiomyolipoma instances in the literature, there were no further abnormalities in our case that would indicate tuberous sclerosis. In decreasing order of occurrence, the epiglottis, vocal cords, ventricular bands, arytenoids, and subglottic region are the most frequent sites of presentation of laryngeal plasmacytoma [4]. This case study demonstrates the value of thoroughly examining all three laryngeal segments—the epiglottis, glottis, and sub glottis. Although a laryngeal mass is less frequently found in the sub glottis and is less visible there, the otolaryngologist should always perform a thorough examination of the larynx when a tumour is suspected to rule out conditions such a subglottic plasmacytoma [5].

## Material and Methods

Throughout the study period, a largely consistent philosophy was used to treat each patient. Major surgical procedures included entire laryngectomy and, in a few instances, horizontal supraglottic laryngectomy. According on the presence of cervical metastases and the precise location of the initial tumour, neck dissection was performed in both clinical stages IV and III of the disease [6]. Twenty-seven tumours (54%) were diagnosed as supraglottic, 14 as glottic (28%) pyriform sinus

***Corresponding author:** Amadan Hassan, Division of Otolaryngology-Head and Neck Surgery, University of Wisconsin, United States; Tel: 19523481096; E-mail: Hassan567@gmail.com

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carcinomas, 2 as subglottic, 4 as transglottic, and 3 as glottic. None of the patients had received radiation or chemotherapy before surgery, and they were all male. The diagnosis was verified in paraffin sections; the youngest patient was 44 years old and the oldest was 75 years old. All tumours were graded according to Glanz and Jakobsson's grading for squamous cell cancer and were divided into 3 categories according to the Broders system and WHO modifications. Additionally, cases were meticulously staged to meet the standards set forth by the American Joint Committee for Cancer Staging and End Results Reporting in 1995. These T-stage measurements were made: T1: 4 (8%) T2, T2: 30 (60%) T3, and T4: 12 (24%) N-stage: 34 N0 (68%), 4 N1, 5 N2, 7 N3, and in two cases, the clinical notes did not mention neck investigation. Without being aware of the clinical stage, course, or therapy of the disease, the histological analyses were carried out [7]. The longest follow-up lasted 96 to 144 months. Informed consent from the patients was obtained and recorded in the clinical history [8]. The Helsinki Declaration and the hospital committee on human experimentation's ethical norms were adhered to during all processes (1975, 1983). Throughout the study period, a largely consistent philosophy was used to treat each patient. Major surgical procedures included entire laryngectomy and, in a few instances, horizontal supraglottic laryngectomy. According on the presence of cervical metastases and the precise location of the initial tumour, neck dissection was performed in both clinical stages IV and III of the disease. Twenty-seven tumours (54%) were diagnosed as supraglottic, 14 as glottic (28%) pyriform sinus carcinomas, 2 as subglottic, 4 as transglottic, and 3 as glottic. None of the patients had received radiation or chemotherapy before surgery, and they were all male. The oldest patient was 75 years old, while the youngest patient was 44 years old (mean age, 58 years) [9]. They were all men. Paraffin sections provided proof of the diagnosis. All tumours were graded using the Glanz and Jakobsson system for squamous cell cancer, which divides tumours into three classes (Broders, WHO modification). Additionally, cases were meticulously staged to meet the standards set forth by the American Joint Committee for Cancer Staging and End Results Reporting in 1995 [10]. The following T-stage measurements were made: 4 (8%) T1, 4 (8%) T2, 30 (60%) T3, and 12 (24%) T4. N-stage: 34 N0 (68%), 4 N1, 5 N2, 7 N3, and in two cases, the clinical notes did not mention neck investigation. Without being aware of the clinical stage, course, or therapy of the disease, the histological analyses were carried out. The longest follow-up lasted 96 to 144 months. Informed consent from the patients was obtained and recorded in the clinical history. The Helsinki Declaration and the hospital committee on human experimentation's ethical norms were adhered to during all processes (1975, 1983) [11].

## Discussion

Lipomas, chondromas, vascular tumours, and paragangliomas are the most well-known mesenchymal tumours of the larynx. The superior laryngeal nerve gives rise to schwannomas, which are typically found in the aryepiglottic plica or submucosally in a pedunculated form. Chondromas can often be found in the posterior lamina of the cricoid cartilage and result in a tumefaction of the subglottic. The aryepiglottic fold was the site of the lesion in the two prior cases of laryngeal angiomyolipoma described in the literature, which resulted in a partial obstruction of the vocal cords [12]. In our case, a vascularized, pedunculated polypoid lesion measuring 1.5 cm in diameter and with a smooth surface was found to originate from the vocal process of the arytenoid and the back of the vocal cord, partially obstructing the end larynx. Laryngeal angiomyolipoma may not have any symptoms, although they can change depending on where and how big the lesion is. In prior cases, snoring, dyspnoea, dysphonia, dysphagia, and odynophagia have been the most prevalent symptoms. In our case, dysphonia and dyspnoea were the main symptoms that led the patient to seek medical attention. Depending on the location and size of the lesion, different treatment methods are used for benign laryngeal masses. While big lesions may require an external approach (laryngofissure, lateral pharyngology, or thyrotomy) minor lesions can be removed with end laryngeal microsurgery. Both techniques have been performed in prior cases, however in our patient; the end laryngeal microsurgery technique completely removed the lesion [13].

It is challenging to make an endoscopic preoperative histological diagnosis since the tumour has submucosally developed. Angioleiomyomas and other adipose tissue tumours (angiolipoma, liposarcoma) should be initially taken into account in the microscopic differential diagnosis. There is no myoid differentiation in angiolipoma. Angioleiomyomas don't have lipoid components. A diligent search for lipoblasts in the lipoid component is necessary to avoid misdiagnosing a liposarcoma [14]. When angiomyolipoma is found in the kidneys, HMB-45 positive has been linked to tuberous sclerosis. In our case, neither the HMB-45 dye nor the Melan-A melanocytic marker was taken up by the tumour. Angiomyolipomas are always positive for melanocytic markers. In our situation, like in the other examples that have been documented, it was not noticed. However, the presence of muscle, fat and tortoise-like blood arteries makes it simple to diagnose angiomyolipoma. Neither in our instance nor in previous documented examples of nasal angiolipomas was HMB-45 positive found. This data leads us to hypothesise that nasal angiomyolipomas differ from their counterparts in terms of immunohistochemical characteristics [15].

## Conclusion

Malignant mixed tumours can be classified into three main subtypes by the World Health Organization (WHO): carcinoma ex-pleomorphic adenoma, metastasizing mixed tumour, and carcinosarcoma. Contrary to metastasizing mixed tumour and carcinosarcoma, or real malignant mixed tumour, which contains a dual malignant component (carcinomatous and sarcomatous), which is why they are regarded biphasic; carcinoma ex-pleomorphic adenoma only develops an adenocarcinoma as its malignant state. Major salivary glands are the most frequently reported site for carcinosarcoma in the head and neck, although other sites such the nasal and oral cavities, nasopharynx, bronchi, lung, and trachea are uncommon, and the larynx is even more uncommon. Similar to other laryngeal carcinomas, laryngeal carcinosarcoma has a similar clinical appearance, with dysphonia, dyspnea, and dysphagia being the most often reported symptoms. The most advised course of action for carcinosarcoma is surgical excision with wide margins, although there is disagreement over the optimum therapeutic alternatives. In any case, the particular therapeutical strategy needs to be adjusted to the tumour stage, location, and size.

In the patient at hand, an endoscopic supraglottic horizontal laryngectomy with laser CO was carried out (2). In the instance of supraglottic laryngeal squamous cell carcinoma, it has already been stated that the effectiveness of endoscopic laser horizontal laryngectomy is comparable to the external technique in terms of oncological outcome (as the surgical margins were disease-free) and functional outcomes. But to our knowledge, this is the first instance of endoscopic laryngeal carcinosarcoma treatment. Due to the patient's I general health issues, particularly the high neck vascular impairment (which posed a strong contraindication to a neck dissection), (ii) laryngeal cancer stage (T2NOMO), and (iii) the conclusive histologic diagnosis, we decided against performing a prophylactic neck dissection.

## Acknowledgement

None

## Conflict of Interest

None

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