Did someone say 'short of breath'?

Introduction

This case highlights the known yet rare presentation of stridor caused by a supraglottal mass in an elderly patient. This patient came in to hospital being short of breath. She had a cough and also dysphagia. However, not only could the physical sign of stridor have been missed, but also the ultimate diagnosis. Multiple pathologies often co-exist in the elderly, hence the need to capture salient features in the history and undertake a careful physical examination relevant to the presenting complaint. It is also helps to develop clinical acumen to spot occult physical signs, such as the mild stridor in this case, which prompted urgent attention. This was exaggerated on attempting to mobilize. Principally in the elderly, checking the activities of daily living gives added information.

Discussion

Shortness of breath is a common symptom, but not always the result of cardiac failure or respiratory disease. It is important to consider other causes, as tumours are not uncommon in the elderly.

Stridor in the elderly can occur secondary to any vocal cord dysfunction, e.g. vocal cord oedema or paralysis, laryngeal tumours and allergic reactions. Vocal cord dysfunction may mimic asthma so patients are mistakenly and unsuccessfully treated for asthma. Epiglottitis is more common in children than in adults.

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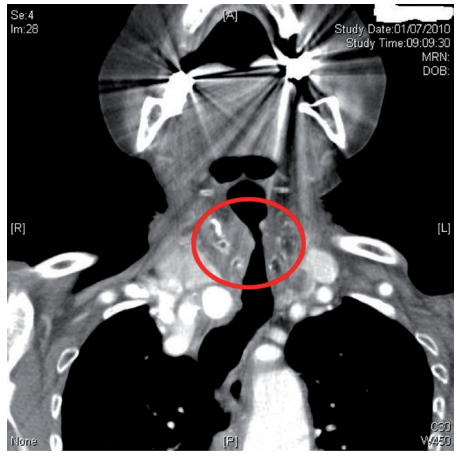
Laryngeal cancer is the second most common type of head and neck cancer worldwide and is less common in women – men are at as much as 30 times greater risk for this disease (Chu and Young, 2008). Older individuals are at higher risk, with most cases in patients between 64 and 79 years of age. In 2002 approximately 160 000 cases of laryngeal cancer and 90 000 deaths were reported worldwide (Parkin et al, 2005).

The percentage of laryngeal cancers originating in the supraglottis varies from country to country: in the United States, only 30–40% of laryngeal cancers originate in the supraglottis, while in Europe the supraglottis is the most common location (Morales-Angulo et al, 1998).

Supraglottic lesions have many differential diagnoses: haemangiomas are common in children while chronic inflammations and infections may be found in adults. Other than cancers, atypical carcinoid, non-Hodgkin's lymphoma and extra-medullary plasmacytoma are common presentations in the elderly (Salerno et al, 2007).

Cigarette smoking is the most important risk factor for laryngeal cancer – 96% of patients have a history of smoking (De Stefani et al, 2004). Smoking and excess alcohol consumption are the most notable risk factors, and have a synergistic effect, with the risk increased 100-fold in individuals who both smoke and drink. Other risk factors include human papilloma virus, chronic gastro-oesophageal reflux and radiation.

Figure 1. Computed tomography of the neck – sagittal section of the tumour showing the narrowing contributing to stridor.



CASE REPORT

An 84-year-old woman had presented to the emergency department with a 1-week history of having been short of breath with productive cough and swollen ankles. As she was thought to be stable, she was discharged home with antibiotics and diuretics.

The following night the patient returned, again feeling acutely short of breath. The team on duty that night found, in addition, that she had suffered 2 months of increasing dysphagia and a weight loss of 6.5 kg. The quality of her voice had also changed. She had had chronic bronchitis in the past. She did not drink alcohol but was still a smoker.

Examination revealed that she was very frail, severely kyphotic, and now short of breath possibly as a result of heart failure and/or chest infection. She had a hoarse voice and cervical lymphadenopathy. When she tried to get off the examination couch, the team recognized an almost inaudible hint of stridor. This observation alone required an urgent ear, nose and throat opinion. Swift nasendoscopy showed a large erythematous lesion obscuring the view of the supraglottic region leaving a very narrow glottic chink filled with secretions. She was transferred immediately to an ear, nose and throat unit for further management.

The computed tomography scan of her neck (*Figure 1*) confirmed asymmetry between the vocal cords and a left-sided supraglottal mass. Computed tomography of the chest confirmed cardiac failure and chest infection with emphysema. No mediastinal nodes were seen.

The patient was listed for theatre but she suffered a fall sustaining a head injury. A computed tomography scan confirmed an acute right middle cerebral artery infarct, which was the likely cause of the fall. Sadly, the patient died before a confirmatory biopsy could be performed.

History taking in the elderly is notably challenging. The symptom of shortness of breath may be attributed to the 'ageing process' or commonly to cardiovascular or respiratory disease, thus delaying diagnosis. The importance of thorough history-taking and focused examination is illustrated in this case where subtle laryngeal obstruction was promptly observed.

Cervical lymphadenopathy is a frequent finding with supraglottal lesions, and 78% of patients with such lesions have palpable cervical metastases at initial presentation (Salerno et al, 2007). Persistent dysphagia should also draw attention to the pharynx. Nasendoscopic examination is required to obtain views beyond the pharynx to clinch a diagnosis of a supraglottal mass.

Physical signs for the presence of a supraglottal mass, such as hoarseness and stridor, are subtle, as this case illustrates and one should be alert not to miss them. The average duration of symptoms before presentation is 2–4 months by which time 20% of patients have an asymptomatic mass in the neck (De Stefani et al, 2004). Investigating and treating these cases produces relatively good prognosis, with supraglottic cancer having a 45% 5-year survival rate (Bocca et al, 1984) (*Table 1*). Thus, early diagnosis and treatment can have significant effects on quality of life.

Table 1. Investigating laryngeal masses

No specific laboratory studies are available for investigation of patients with supraglottic masses
Magnetic resonance imaging is especially useful in assessing involvement of the base of tongue, fatty infiltration and spread to regional lymph nodes
Direct laryngoscopy is performed under general anaesthetic
Panendoscopy (bronchoscopy, nasendoscopy) is the gold standard for assessing secondary lesions

The priority with any treatment for supraglottic cancer is containment of the disease with preservation of the voice. However, this may not always be possible depending on the extent of the disease. Treatment options include surgery, radiotherapy and chemotherapy, or an appropriate combination of these (Brasnu et al, 1992). Despite the intensity of treatment regimens, undergoing treatment would be worthwhile if a 5-year survival with good quality of life can be achieved. **BJHM**

Bocca E, Calearo C, de Vincentiis I et al (1984) Occult metastases in cancer of the larynx and their relationship to clinical and histological aspects of the primary tumor: a four-year multicentric research. *Laryngoscope* **94**(8): 1086–90 (doi: 10.1288/00005537-198408000-00017)

LEARNING POINTS

- Clinical examination is an art, and the skills should be developed.
- Great care should be taken to elicit the relevant physical signs for suspecting a laryngeal tumour – stridor, wheeze, dyspnoea and hoarse voice.
- Checking activities of daily living may elicit signs, such as stridor, which are not evident on cardiovascular and respiratory examinations.

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Parkin DM, Bray F, Ferlay J et al (2005) Global cancer statistics, 2002. *CA Cancer J Clin* **55**(2): 74–108 (doi: 10.3322/canjclin.55.2.74)

Salerno G, Mignogna C, Cavaliere M et al (2007) Oncocytic cyst of the larynx: an unusual occurrence. *Acta Otorhinolaryngol Ital* **27**(4): 212–15

Zerocream in management of ichthyosis

Results from an independent survey in which almost 150 members of the Ichthyosis Support Group tried Zerocream emollient cream showed that 85% of respondents liked Zerocream, 74% said it was as good as or better than their current emollient and 68% wanted to continue using the product.

Almost half of the respondents reported an improvement in their ichthyosis symptoms, with a decrease in dryness being the most frequently stated improvement (69%), followed by a decrease in scaling and a reduction in the need for other creams.

The survey also found that 92% of respondents regularly use emollients, but appear to have had little or no information or education about treatments, with 77% never having been shown how to apply an emollient correctly.

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Fluido Compact blood and fluid warmer launched

Fluido Compact is an easy to use, accurate, safe and cost-effective system for daily blood and fluid warming. It will be distributed in the UK by Central Medical Supplies Ltd. The unit rapidly warms fluids to the target temperature. Blood and fluid warming help maintain normothermia and contribute to a positive patient outcome.

Fluido Compact has a one button operation and intuitive control panel, making it easy to use. The disposable set comprises a cassette, a 40 cm patient line and priming volume of 3 ml.

The system provides accurate and safe warming, as it comes with embedded software for maximum patient safety through an independent control system and multiple temperature sensors. As it requires no maintenance, Fluido Compact is also a cost-effective system.

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