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Research Article

A UNIQUE CASE OF CARCINOMA HYPOPHARYNX AND UPPER OESOPHAGUS PRESENTING WITH ANTERIOR NECK ABSCESS

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ABSTRACT

Hypopharyngeal Carcinoma represents approximately 7% of all cancers of the upper aerodigestive tract. Oesophageal Carcinoma is the 6th most common cause of cancer deaths worldwide. Both these affect men more often than women. They usually present with symptoms of dysphagia, weight loss, haematemesis, epigastric pain and dry cough. The main type of Hypopharyngeal Carcinoma is Squamous Cell Carcinoma (SCC) while the two main types of Oesophageal Carcinoma are Squamous Cell Carcinoma which arises in the upper half of the oesophagus and Adenocarcinoma which develops in the lower half of the distal oesophagus. In our case, we discuss about an atypical scenario of SCC of cricopharynx and upper oesophagus where a 50 year old male presented in the out patient department with an infected anterior neck abscess of 4 cm diameter along with dysphagia and restricted neck movements. The main aim of our study was to identify a relationship between the unrelated conditions. All blood parameters were assessed and found to be normal. The drained abscess did not recur after treating with proper systemic antibiotics. On Oesophagogastroduodenoscopy, an ulceronodular growth was identified from cricopharynx to the level of 18 cm of the oesophagus from the central incisors. Biopsy from the lesion revealed infiltrating well differentiated squamous cell carcinoma. The patient was given concurrent Chemotherapy and Radiotherapy. Thus, it may be necessary that we rule out the presence of carcinoma while dealing with neck abscesses.

INTRODUCTION

Hypopharyngeal Carcinoma (HPC) is a relatively uncommon disease which has an incidence of less than 1 per 100000 of the population and usually presents in patients aged 60-70 years [1]. Carcinoma of the piriform sinuses and posterior pharyngeal wall occurs mainly in men and is associated with alcohol and tobacco smoking. Postcricoid carcinoma is more common in women and is associated with sideropaenic dysphagia leading to a wide variation in geographical incidence, being relatively more common in India, Iran and Japan [2].

Oesophageal cancer is the fourth most common cause of cancer related deaths in India. Worldwide, almost 4,00,000 new cases [3] of oesophageal cancer are diagnosed annually. Approximately 47,000 new cases are reported each year in India out of which about 42,000 cases have reported deaths [4].

Hypopharynx is the longest and most inferior portion of the three segments of the pharynx and links the oropharynx to the oesophagus. It is wide superiorly and progressively narrows down towards the level of the cricopharyngeal muscle. The hypopharynx is a continuous area; the oropharynx above it and the cervical oesophagus through the cricopharyngeal sphincter below it. This region is known as the postcricoid area.

The cervical oesophagus is defined as the upper part of the oesophagus between the cricopharyngeal muscle and the thoracic inlet. It has been estimated that this area accounts for less than 5% of all oesophageal cancers [5].

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The most common symptoms of hypopharyngeal cancer include dysphagia, chronic sore throat and foreign body sensation in the throat.

The most common symptoms of oesophageal carcinoma are dysphagia, weight loss, haematemesis, epigastric or retrosternal pain, hoarseness of voice and persistent dry cough in order of appearance.

The principle histological type of hypopharyngeal carcinoma is squamous cell carcinoma.

The principle histological types of oesophageal carcinoma are squamous cell carcinoma and adenocarcinoma. SCC accounts for about 80% of these cancers although adenocarcinoma is on the increase due to changing lifestyles [6].

A skin abscess is a tender mass generally surrounded by a coloured area from pink to deep red. Abscesses are often easy to feel by touching. The vast majority of them are caused by bacterial infections associated mostly with Diabetes Mellitus and immunocompromised states.

Although some patients with both these cancer types can be cured, the treatment is based on the location of tumour, extent, infiltration, metastasis and early diagnosis. Aggressive tumours can diminish the quality of life and be lethal.

In this case report, we discuss about an uncommon presentation of a neck abscess with carcinoma of the oesophagus and attempt to look for a connection between the two states.

MATERIAL AND METHODS

Case History

A 53 year old male presented in the Out Patient Department of The Department of Otorhinolaryngology and Head & Neck Surgery, Meenakshi Medical College and Hospital with complaints of a painless swelling over anterior part of the neck for 15 days. It started from the lower part of left Sternocleidomastoid muscle and increased in size growing towards the left and above.

There was also complaint of dysphagia for 15 days which was intermittent and present for both solids and liquids.
There was a history of mucopurulent discharge from the swelling for 3 days. The discharge was not foul smelling and minimal in amount.

The patient had mild restrictions of neck movements on either side for 3 days which was not painful.

There was history of intermittent fever for 1 day which was mild and without aggravating and relieving factors.
There was no history of vomiting, nausea, regurgitation, cough, dyspnoea, haemoptysis, haematemesis, otalgia, otorrhoea, headache, hard of hearing, tinnitus, vertigo, rhinorrhoea, post nasal drip, nasal obstruction, sneezing, epistaxis, drug allergies, weight loss and decreased appetite.

The patient was not a known case of Diabetes Mellitus, Systemic Hypertension, Pulmonary Tuberculosis and Bronchial Asthma. He was not a known alcoholic, smoker or tobacco user.

Examination Findings

Examination of the neck revealed a globular swelling of 4 cm in diameter on the anterior aspect extending to the left at the level of left Sternocleidomastoid Muscle (Figure 1). It was fluctuant and tender. The skin over the swelling was dark, necrotic and warm. A pus point was visible on the lower aspect of the swelling.

Examination of the throat and indirect laryngoscopy showed a bulky posterior pharyngeal wall with pooling of saliva. No evidence of a growth was noticed here and thus the patient was asked to undergo a oesophagogastroduodenoscopy.

Further examination of ear, nose and paranasal sinuses were found to be normal.
The complete blood profile, blood sugar levels, renal function tests, liver function tests and viral markers were all found to be normal.

On oesophagogastroduodenoscopy under xylocaine spray, an ulceronodular growth was identified from cricopharynx to the level of 18 cm of the oesophagus from the central incisors therein narrowing the lumen (Figure 2).

Biopsy from the lesion revealed G1 grading infiltrating well differentiated squamous cell carcinoma (Figures 3 and 4).

Computed Tomography of neck (plain and contrast) showed moderate sized ill defined heterogeneously enhancing heterodense lesion with central low attenuation area in left side of lower neck involving overlying sternocleidomastoid muscle. Irregular cutaneous defect in the anterior and left lateral aspect of adjacent neck with few air pockets in subcutaneous plane seen. The lesion extended deep into the neck encasing adjacent cervical oesophagus compressing and displacing it to the right and causing anterior displacement and compression of adjacent trachea (Figure 5). Few enlarged lymph nodes in the left submandibular and upper, middle and deep cervical region on left side.

Computed Tomography of the Brain revealed no evidence of metastasis.

X Ray Soft Tissue Neck Lateral View shows increased prevertebral soft tissue thickness with small specks of calcifications in lower cervical level causing anterior bowing of posterior wall of trachea with luminal narrowing (Figure 6). There is evidence of subcutaneous soft tissue swelling with lucent areas in the anterior neck indicating subcutaneous emphysema or abscess.

Culture and Sensitivity of the pus revealed presence of Gram positive cocci and Gram negative bacilli.

Treatment

Procedure done - Incision & Drainage. An incision was given at the most dependent point and the contents of the swelling were drained which included about 50ml of pus

which was yellowish white in colour, foul smelling and non blood stained. The contents were sent for culture and sensitivity. Antibiotic soaked gauze was applied over the incisional area. Antibiotic therapy was given along with intravenous fluids and NSAIDs. After the confirmation of the malignant lesion with biopsy, patient was given concurrent Radiotherapy and Chemotherapy.

Figure 1 Anterior neck abscess before incision and drainage.

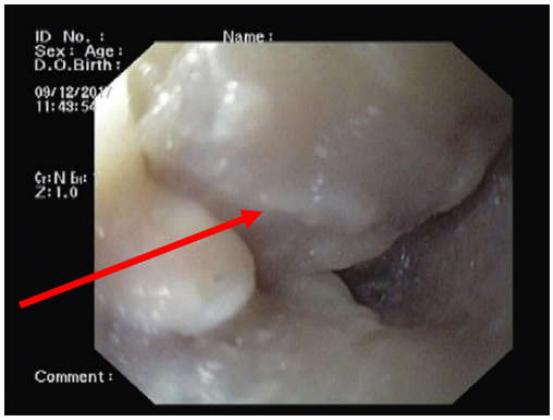

Figure 2 Ulceronodular Growth on Endoscopy.

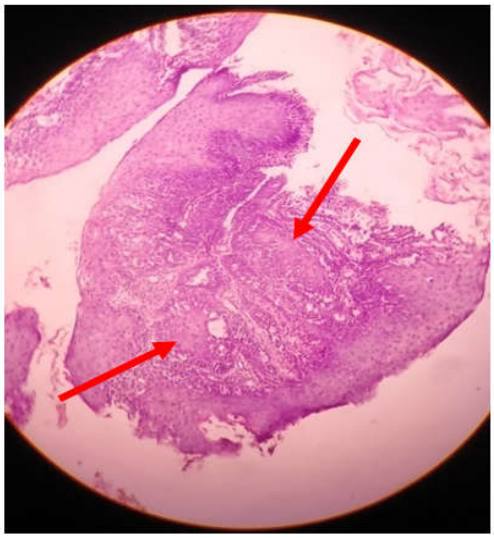

Figure 3 Malignant Squamous Cells reported on HPE at 10x magnification.

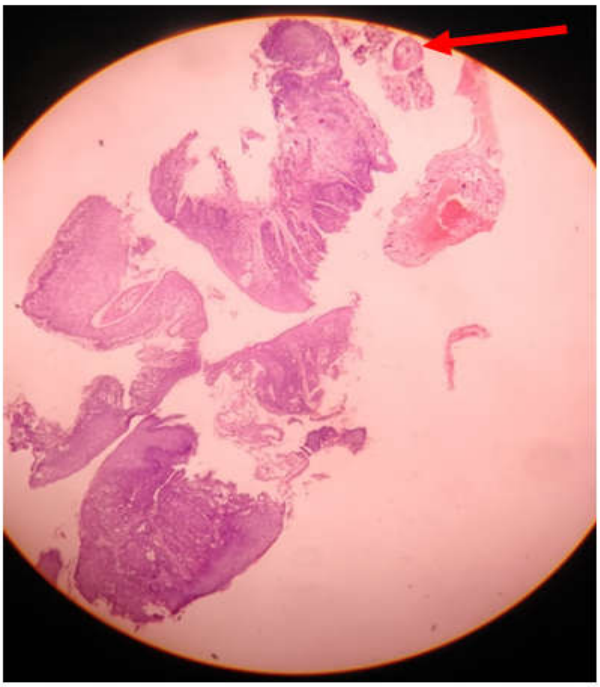

Figure 4 Squamous Pearl reported on HPE at 4x magnification

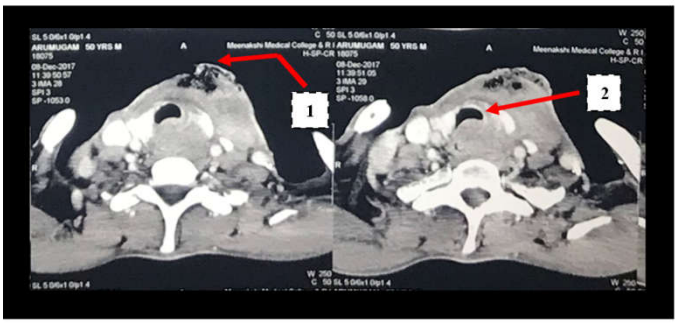

Figure 5 Computed Tomography showing air pockets in subcutaneous plane (labelled as 1) and anterior displacement of trachea (labelled as 2).

Figure 6 Radiograph showing increased prevertebral soft tissue, soft tissue swelling and luminal narrowing of trachea due to bowing.

RESULTS

Thus, based on the investigative procedures done it was clear that the tumor had aggressively grown to cause displacement of the trachea. The clinical staging of the tumor was found to be $T_2N_2M_0$. The reason of the infected abscess was not clear but it could be because of an acute case of upper respiratory tract infection in association with the ulcerative nature of the carcinoma which in turn helped in the spread through neck spaces.

DISCUSSION

In 1970, Harrison found 60% of hypopharyngeal carcinomas arising in the postcricoid region in his practice in London, UK[7]. In the USA and Canada, 65-85% of hypopharyngeal carcinomas involve the piriform sinuses, 10-20% the posterior pharyngeal wall and 5-15% the postcricoid region[8].

Hypopharyngeal Carcinoma is relatively uncommon in all cancer cases. According to Malaysia Cancer Statistic 2006, HPC incidence is reported only 0.1% in female and 0.2% in male per 1,00,000 populations in Peninsular Malaysia [9]. Indian population is the commonest affected group in which male has 0.8% and female has 0.7% cancer incidence per 1,00,000 populations. More than 95% of HPC are squamous cell carcinoma, 70% of them are moderate to well differentiated carcinoma [10].

Carcinoma of the oesophagus carries a poor survival rate if it is not surgically resectable. The etiology of oesophageal cancer is still uncertain but epidemiological studies have suggested that environmental factors which include smoking, alcohol and a long term exposure to chemicals play a significant role. In addition generic anomalies of the p53 gene have also been associated in oesophageal cancer of younger individuals [11].

Squamous Cell Carcinoma and Adenocarcinoma of Oesophagus are both more common in men. SCC can occur in any part of the oesophagus but it usually arises in the upper half. Adenocarcinoma develops usually as a result of GERD and thus it arises in the lower half of the distal oesophagus and often involves the oesophagogastric junction.

Dysphagia is more common in older adults and affects upto 15% of the older adult population [12]. Although it must be noted that not all cases of carcinoma hypopharynx or oesophagus present with the typical symptoms. Atypical presentations, although not very common should always be looked for. The first step in evaluating patients with Dysphagia is a proper history taking to determine if the Dysphagia is due to an oropharyngeal cause (e.g. Parkinson Disease and Stroke) or an oesophageal cause (eg: physical obstruction) [13]. Oropharyngeal Dysphagia is characterised by difficulty to push down the bolus of food at the level of the throat. Oesophageal Dysphagia is characterised by difficulty in swallowing after initiating the swallow. Such patients usually give a history of the bolus being stuck at the level below the throat, like in this case.

Surgery remains the cornerstone of treatment for oesophageal cancer. High grade dysplasia in a patient with Barrett oesophagus that cannot be adequately treated endoscopically usually requires surgery[14].

Contraindications to surgery include metastasis to N2 nodes (i.e. cervical or supraclavicular lymph nodes) or solid organs (e.g. liver, lungs) and invasion of adjacent structures (e.g. the recurrent laryngeal nerve, tracheobronchial tree, aorta, pericardium).

Primary surgical treatment is limited only to patients with good performance status, without serious concomitant diseases e.g. patients with T1/T3 cancer of thoracic oesophagus or oesophagogastric junction or even with metastases to regional lymph nodes. Only selected patients with T4 tumours are eligible for surgery. Localisation of cancer is crucial in making a decision about radical operation.

In recent reports of SCC of the oesophagus the effect of a regimen using CDDP seemed to give a better response. Tanabe *et al.* [15] reported that of the management regimens with five anti cancer drugs (CDDP, VP-16, VCR, ADM and CPA), CDDP and VP-16 were especially effective and that brain radiotherapy should be applied for the prophylaxis of cerebral metastasis.

Radiotherapy alone is used only as part of palliative care. Achieving partial regression significantly influences the quality of life connected with swallowing improvement and pain relief.

The neck abscess is an infection of the potential spaces of the throat and the neck because of bacterial pathogens which may present diagnostic difficulties and lead to serious complications. Previously, they had higher mortality rates but now-a-days the mortality rates have dropped substantially [16] because of early diagnostic methods, broad spectrum antibiotics and surgical interventions. Thus all neck abscesses must be diagnosed early and treated with surgical drainage along with parenteral therapy because it might cause early complications (restricted neck movements) to late complications (retro pharyngeal abscess, Ludwig's angina).

In our case, it was found that the patient did not have any of the aforementioned etiological or environmental factors and yet presented with an aggressive growing tumor.

CONCLUSION

It might be thus concluded that the presence of neck abscess without any other comorbidities might warrant the need to rule out any aggressively growing malignancy.

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