



## UNUSUAL CASE OF SECONDARIES NECK WITH UNKNOWN PRIMARY

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**ABSTRACT** This is a case of an 18yr old presenting as secondaries neck with an unknown primary, its workup, treatment and response. The primary in this case could not be found with extensive clinical, radiological and endoscopic work up, and diagnosis was made with correlation of the Immuno-histochemistry obtained from the lymph node biopsied, as a case of nasopharyngeal carcinoma. The case is considered rare, as the presentation was only a discrete neck swelling with no other features or symptoms and the age of presentation makes the diagnosis all the more difficult. Also the prevalence of nasopharyngeal carcinoma in south India being uncommon, made the presentation remarkable.

**KEYWORDS :** secondaries neck; unknown primary; occult primary; nasopharyngeal cancer;

## INTRODUCTION

The epidemiology of nasopharyngeal carcinoma (NPC) is characterized by its unique geographic distribution. Southern China has one of the highest incidence rates of NPC in the world. Decades of epidemiological studies have shown that NPC has unique prevalence features, including regional, racial and familial aggregation.[16]

In India, NPC is also rare, except for the Hill States of Northeast India, particularly Nagaland, Manipur, and Mizoram. The striking feature of NPC in Northeast India is that the incidence ranges over the complete spectrum from the lowest (as 0.5/100 000 to 2.0/100 000 among Caucasoid) to the highest (as ~20/100 000 among Cantonese/ Zhongshan dialect Chinese)[17]

Cancer of unknown primary site (CUP) is a heterogeneous group of malignancies presenting with distant metastases without an identified primary tumor at diagnosis[7]

Metastasis to the lymph nodes of the neck with an occult primary is relatively rare, accounting for about 3% of all head and neck cancers. Metastasis of unknown primary on the whole carries a very poor prognosis, but in the head and neck region this is not the case[1-4]

Patients who have a metastatic neck lymph node will have their primary tumors discovered in more than 90% of the cases through a careful physical examination,[1] computed tomography (CT) and/or magnetic resonance imaging, endoscopy and biopsies[5] and, more recently, by elective tonsillectomies and newer imaging techniques such as positron emission tomography scans.[6].

Extended field radiotherapy can be used to treat the potential primary site of origin in a case of head and neck. This aggressive approach, although associated with significant morbidity, has been advocated by many oncologic centers[8-13] and has also been challenged by others.[14] Management of secondary neck of undetermined primary is controversial as the best treatment for such cases remains unclear because of the heterogeneous pathological condition[15]

## CASE REPORT:

18 year old boy presented with complaints of swelling over the right side of the neck for the past one month .Swelling was located on the upper right side below the mandible , insidious in onset and slowly progressive to attain current size. It was associated with pain, and history of epistaxis .No other history of any Uri , fever , weight loss , vomiting or dysphagia.'

On examination – solitary 3x2cm swelling ,over the anterior triangle of

the neck , 3 cm below body of mandible on the right side .It was firm in consistency and fixed , located deep to deep fascia of the neck. No warmth ,tenderness, or discharge noted. No other swellings noted.

Clinical examination of the nose, post-nasal space, oral cavity, oropharynx, larynx and hypopharynx, including palpation of the oral cavity and tongue base should be carried out under direct vision did not reveal any lesions .

Examination of the skin and scalp of the head and neck region showed no significant cutaneous lesions.

Clinically the site of the primary could not be found, and hence subjected to radiological investigations and followed by pan-endoscopy of the aerodigestive tract.

## INVESTIGATIONS:

**USG NECK-** bilateral cervical lymphadenopathy, bilateral parotid enlargement and features of multinodular goiter.

**FNAC-** scattered clusters of oval polygonal cells with ill-defined cell outline, vesicular nucleus and prominent nucleoli admixed with lymphocytes in a serofibrinous background. Occasional spindle cells and giant nuclei are seen .

**SMEAR POSITIVE FOR MALIGNANCY** –secondary carcinomatous deposits in lymph node.

**UGISCOPY-**normal study

**CHEST XRAY**–normal

**MRI NECK and oropharynx-** Node in the right retropharyngeal region at the level of nasopharynx and oropharynx. It is seen exerting a mass effect on the right lateral wall of nasopharynx.

Two nodes seen in right upper and mid deep cervical region. These two nodes are seen abutting each other closely. Right ICA and ECA are compressed upon by these nodes. Superiorly the nodes are seen abutting the inferior surface of right parotid gland. Anteriorly the node is seen abutting the right submandibular gland.

Enlarged nodes seen in the left mid deep cervical region.

All these nodes show intermediate to hyperintense signal on STIR images On screening USG the nodes appeared hypoechoic and bulky with increased vascularity. Shear wave velocity in right deep cervical

nodes on ARFI was <2m/sec [not in metastatic range]

Possibility of –lymphoma, kikuchi/kimura disease.

**THYROID FUNCTION TEST**-within normal limits

After

**DIRECT NASAL ENDOSCOPY** –Right spur impinging on inferior turbinate, mucoid discharge. Polypoidal changes seen in middle meatus Left –normal

**VLE**- bilateral pyriform fossa free. bilateral vocal cord normal and mobile.

**UPPER GI ENDOSCOPY**-did not reveal any abnormality

Endoscopy did not reveal any suspicion of ulceration, change in colour, asymmetry or fullness, hence no biopsies were taken. Since all investigations were negative this is a case of TRUE unknown primary.

**Clinical stage** - cTx N2 M0

Patient was planned for selective neck dissection of the node to confirm the pathology.



Figure 1 image shows enlarged level 2 node.



Figure 2 MRI neck showing space occupying lesion [level 2 node]



Figure 3 Large level 2 node being dissected

The biopsy was subjected to the following Immunohistochemical analysis. Latent Membrane Protein – Tumor cells shows Positive reaction [EBV positive]

Keratin- Tumor cells shows Positive reaction [in squamous cell carcinoma and non keratinizing ca , also to differentiate between lymphoma]

Leukocyte common antigen - Tumor cells shows Negative reaction [positive in lymphoma]

Cytokeratin 5/6- Tumor cells shows Positive reaction Taking the morphology and IHC into consideration features were suggestive of –METASTATIC NASOPHARYNGEAL CARCINOMA

**Treatment administered** – Chemoradiation + adjuvant chemo 6Mv x-ray beam therapy TD:66GY Along with 3 cycles of 3 weekly CDDP [cisplatin]

Following which he developed mild irradiation skin changes over the neck and LRI for which he was treated .

Follow up done every 4weekly after 1 year – patient was clinically asymptomatic and no evidence of any nodal spread on CT.

#### DISCUSSION:

Nasopharyngeal carcinoma presenting as a secondary neck with unknown primary is relatively rare, and its prevalence in south India is uncommon unlike the north eastern states of India.[17]

The case we have reported resides in the coastal province of south India (Chennai)

The median age at diagnosis is 60 years with a male predilection[18] . But in our case the presentation was at a relatively early age around 18yrs.

Since 2003 CUP is divided into two separated groups the favorable (20%) and the unfavorable (80%) group[19]. Favorable subsets are those entities that respond to local and/or systemic treatments and have a longer survival. Our case falls in the category of favourable , and hence a less common entity.

Among cancers of unknown primary lesions adenocarcinoma is the commonest histopathological subtype.[20]

This case is a squamous cell carcinoma involving cervical lymph nodes , of which level 2 was involved (jugulodigastric or upper nodes) which happens to be the common site .

In such cases a panendoscopy with biopsy should follow. Radiology is very helpful with a sensitivity of CT-scan in 22%, MRI in 36% and PET-scan up to 60% [19]

Treatment protocol for such cases include Neck dissection and/or irradiation of bilateral neck and head-neck axis. For advanced stages induction chemotherapy with platinum-based combination or chemoradiation [20].

Chemoradiation could be indicated in N2 or N3 cases with cisplatin based chemotherapy. Chemoradiation could be associated with significant grade 3 toxicities [18]Squamous cell carcinoma involving cervical nodesHave a mean 5-year survival: 60–65%[20]

Our patient was offered similar treatment and was on a 4 weekly once follow up regime upto 1year, which showed the patient to be clinically asymptomatic and no nodal spread on CT showing a good response to the treatment.

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