



Original Article

Non-thyroid Neoplastic Neck Swelling Clinical and Histopathological Evaluation

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Abstract

With a view to cast a glance on pattern of non-thyroid neoplastic neck swelling a descriptive study was conducted among 54 cases irrespective of age and sex. It was observed that 85.2% non-thyroid neoplastic masses were malignant and of which 78.3% metastatic, and among them 80.6% were supraclavicular in origin. Among primary malignancy 90% were lymphomas and 37.5% of benign neoplasm were pleomorphic adenoma. Histopathologically 72.2% secondary tumours were squamous cell carcinoma.

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Introduction

A swelling in the neck is frequently the first manifestation of an upper aero-digestive tract malignancy. Early detection and treatment of tumours that present in this fashion are critical. The differential diagnosis of a neck mass is dependent on its location and patients' age. In the adult population a neck mass greater than 2 cm in diameter has greater than 80% probability of being malignant. Metastatic squamous cell carcinoma in a cervical lymph node is usually from a primary tumour of the oropharynx, hypopharynx and nasopharynx. Nodal metastasis in the neck gland is associated with a worse prognosis for most tumour types of the head and neck¹.

Material and Methods

This prospective study was conducted among 54 patients of non-thyroid neck mass. Patients were diagnosed from history and physical examination. A set of investigations were done in case of all

selected patients and diagnosis was confirmed by histopathological examination. All relevant information were recorded in prescribed proforma. Study was conducted in Naogaon and Pabna sadar hospital.

Results

A total of 54 patients of non-thyroid neck swelling were collected irrespective of age and sex. Of which 85.2% were malignant 14.8% were benign neoplasm (table-1).

Table-I. Incidence of neoplastic non-thyroid neck swelling (n=54).

Type	Number of patients	Percentage
Benign neoplasm	8	14.8%
Malignant neoplasm	46	85.2%

Among benign neoplasm pleomorphic adenoma was the commonest (37.5%), followed by schwannoma (25%) (Table-2).

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Table-II. Types of benign neoplasm (n=8)

Types	Number of patients	Percentage
Pleomorphic adenoma	3	37.5%
Schwannoma	2	25%
Lipoma	1	12.5%
Fibroma	1	12.5%
Angiofibroma	1	12.5%

In this study it was found that 78.3% of malignant neck mass was metastatic and 21.7% were primary in origin (table-3).

Table-III. Origin of malignant neck mass (n=46)

Type	Number of patients	Percentage
Metastatic	36	78.3%
Primary	10	21.7%

Primary malignancy was found more in 3rd and 5th decade, 30% each (table-4).

Table-IV. Age incidence of primary malignant lesion (n=10)

Age (in years)	Number of patients	Percentage
0-10	0	0
11-20	1	10%
21-30	3	30%
31-40	1	10%
41-50	3	30%
51-60	1	10%
61-70	1	10%

Histologically 60% of primary malignant neoplasm was Hodgkin's lymphoma, 30% non-Hodgkin's lymphoma and 10% parotid malignancy (table-5).

Table-V. Histological types of primary malignant neoplasm (n=10)

Types	Number of patients	Percentage
Hodgkin's lymphoma	6	60%
Non-Hodgkin's lymphoma	3	30%
Parotid malignancy	1	10%

In this study 36 metastatic non-thyroid neck mass was found. Of which 41.7% were in 6th and 38.9% in 7th decade of age (table-6).

Table-VI. Age distribution of the patient of metastatic neck mass (n=36)

Age	Number of patients	Percentage
0-40	0	0
41-50	4	11.1%
51-60	15	41.7%
61-70	14	38.9%
71-80	3	8.3%

In sex distribution of metastatic neck mass it was found that 80.5% were male and 19.5% female (table-7).

Table-VII. Sex distribution of secondary non-thyroid neck mass (n=36)

Sex	Number of patients	Percentage	M:F Ratio
Male	29	80.5%	4.14:1
Female	7	19.5%	

In this study among 36 secondary tumors primary site was found in 33 cases (92.7%), of which 29 cases (80.6%) were supraclavicular and 4 cases (11.1%) infra-clavicular. Primary site could not be found in 3 cases (8.3%) (Table-8).

Table-VIII. Distribution of primary lesions with secondary in the neck (n=36).

Site	Number of patients	Percentage
Supraclavicular	29	80.6%
Infraclavicular	4	11.1%
Unknown	3	8.3%

Histopathological picture of non-thyroid neck mass shows 72.2% were squamous cell carcinoma, 13.9% adenocarcinoma and 13.9% undifferentiated (table-9).

Table-IX. Histological picture Of metastatic non-thyroid neck mass (n=36)

Histopathological type	Number of patients	Percentage
Squamous cell carcinoma	26	72.2%
Adenocarcinoma	5	13.9%
Undifferentiated	5	13.9%

Discussion

Neoplastic non-thyroid neck mass is a common problem in surgical practice. In this study we considered 54 cases of which 14.8% (8) cases were benign and 85.2% (46) cases were malignant neoplasm (table-1). Among malignant neoplasm 78.3% were metastatic and rest primary lesions (table-3). According to way et al² 15% of neoplastic non-thyroid neck mass were benign and 85% malignant, and among malignant non-thyroid neck swelling 85% were metastatic and 15% primary lesion.

Eight non-thyroid benign neck mass was encountered in this study. Of which 37.5% (3) were pleomorphic adenoma 25% Schwannoma and 12.5% each were lipoma, fibroma and angiofibroma (table-2). Solam and Schroder³ in their study of 288 cases reported 18.8% were pleomorphic adenoma and 1.04% lipoma. Variation may be due to small number in this series.

In analyzing age incidence, it was found that primary malignant swelling was more common in younger age group 3rd and 5th decade than the metastatic swelling, which was in 6th and 7th decade (table-4 and 6). Secondary tumours were more common in male, male female ratio was 4.14:1 (table-7). The ratio was 4:1 in a study by Maran⁴ and 4.73:1 in a study by Wizenbergh et al⁵. In case of primary malignant neoplasm the ratio was 1.5:1. Way et al² described that tobacco and alcohol are the most important etiological factors in head neck cancer. Incidence of tobacco consumption is more in our male population.

In this study 60% of primary neoplasm in the neck was found Hodgkin's lymphoma 30% non-Hodgkin's lymphoma and 10% parotid malignancy (table-5). Russell et al⁶ described Hodgkin's lymphoma is the commonest type.

It was found that 80.6% of the secondary tumour in the neck arise from supraclavicular primary sites, 11% from infra-clavicular sites and 8.4% from undetermined origin (table-8). Way et al² described that 85% of secondary tumour originated from primary above the clavicle and 15% below the

clavicle. Due to limited facilities of investigation we could not find out the primary sites of 8.4% of cases, so is probably this variation. Histologically it was found that, 72.2% cases were squamous cell carcinoma, 13.9% each were adenocarcinoma and undifferentiated (table-9). Rahman⁷ found, 70.6% squamous cell carcinoma, 23, 5% undifferentiated carcinoma and 5.9% were adenocarcinoma. In our study incidence of undifferentiated carcinoma were lower and adenocarcinoma slightly higher than the study of Rahman.

Conclusion

Malignant swelling is the commonest nonthyroid neck mass. Metastatic cervical lymphadenopathy is the most frequent in our context.

For the management of malignant neck mass, early diagnosis is essential. So diagnostic facilities should be modernized and susceptible population should be screened regularly.

References

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