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A Study Of Malignant Cervical Lymphadenopathy With Unknown Primary.

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ABSTRACT

Although most malignant lymphadenopathy in the neck represents lymphomas or metastases from head and neck primary tumors, occasionally, metastatic disease from remote, usually infraclavicular, sites present as cervical lymphadenopathy with or without an obvious primary tumor. In general, these tumors metastasize to supraclavicular lymph nodes but occasionally may present at an isolated higher neck level. A search for the primary tumor includes information gained by histology, immunohistochemistry, and the evaluation of molecular markers that may be unique to the primary tumor site. 100 patients were included. Neck swelling was present in all the cases(100%), followed by fever, loss of weight, malaise, loss of appetite, cough, difficulty in swallowing, and change in voice. Out of 100 cases of cervical lymphadenopathy in the present study, 15(15%) cases were due to neoplastic causes whereas 85(85%) were nonneoplastic causes. Tuberculosis was the most common cause of cervical lymphadenopathy. Among the neoplastic causes of cervical lymphadenopathy, metastatic tumors were most commonly seen in 13(13%) patients. Tubercular lymphadenopathy, nonspecific lymphadenitis, and unknown primary and non-Hodgkins lymphoma were also more common in males. Reactive lymphadenitis was more common in females as compared to males. Out of 13 cases of metastatic secondaries in the neck most of the patients presented with cancer larynx seen in 7(53.84%) patients. Tuberculosis is the most common cause of cervical lymphadenopathy. Fine Needle Aspiration Cytology (FNAC) is an extremely sensitive and specific investigation for early diagnosis.

Keywords: cervical lymph node, non-head, and neck cancer, unknown primary, diagnosis, neck dissection.

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INTRODUCTION

Cervical lymph nodes are a common site of metastases for malignant tumors that originate at primary sites in the head and neck. These include squamous cell carcinomas of the upper aerodigestive tract as well as metastases from the salivary gland, thyroid, and skin cancers [1]. Primary lymphoma in neck nodes must be considered in any differential diagnosis. Occasionally, neoplasms from primary sites outside of the head and neck region may unexpectedly metastasize to the neck [2]. In evaluating a patient presenting with a malignant lymph node and no obvious primary site in the head and neck, it is essential to consider which tumors have the propensity to metastasize to the neck and how such disease should be managed [3]. The mechanism leading to the occurrence of head and neck metastases from many of the distant primary tumors remains obscure, as there are often no obvious lymphatic pathways to explain their mode of spread. An experienced pathologist may help identify specific tumor types by using specific tumor markers [4]. The presence of lymphatic metastases in the neck from a remote primary site has a significant impact on the patient's prognosis. About 1% of all head and neck malignancies are accounted for by metastases from a remote primary site (most frequently identifiable sites include the breast, lung, gastrointestinal tract, genitourinary tract, and, uncommonly, the central nervous system). This review considers the likely individual malignancies (excluding lymphoma and melanoma) that present with cervical or supraclavicular lymphadenopathy. Also discussed is the role of neck dissection in the local treatment of the neck and the likely outcome effect of patients so treated [5].

METHODS

This hospital-based prospective study was carried out in the out-patient and in-patient Department of General Surgery, Government Royapettah Hospital, Government Kilpauk Medical College, Chennai, Tamil Nadu, India in one year (August 2022 to July 2023) in the Patients attending the opd of ENT. Patients with an age of more than 02 years having sub-acute cervical lymphadenitis in whom the lymph node did not regress after adequate antibiotic trial (i.e. Conservative management for at least 2 weeks), and all the patients with chronic cervical lymphadenopathy are included in our study. A detailed clinical history was elicited. Age, sex, duration of symptoms, constitutional symptoms, history of contact with tuberculosis patient, and other relevant aspects were noted. A generalized systemic examination was performed, followed by a detailed local examination. All parameters regarding lymph nodes like size, site, number, location, consistency, laterality, matting or discreteness, mobility, secondary changes, level of lymph node, and involvement of another lymph node (inguinal/axillary) groups were carefully noted. Detailed examination was carried out to find out any dental infection, tonsillar pathology, or head and neck malignancy. An attempt was made to find out the primary site in case of cervical lymph node suspicious of malignant deposits on clinical examination. After establishing a provisional clinical diagnosis, further investigations were carried out to confirm the diagnosis. These included Routine hematological investigations like Haemoglobin estimation, total and differential leukocyte count, ESR, Liver function test, and blood sugar level were established as preoperative investigations. All patients underwent ELISA for HIV infection. X-rays Chest, USG neck, and FNAC were done in all patients. CT scan of the neck was performed for searching primary in cases of occult primary. All the findings were noted in pretested proforma and proper statistical analysis was performed.

RESULTS

The present study comprises 100 cases of Cervical Lymphadenopathy. Different clinic demographical variables were studied. The observations and results of the present study are as below. In the present study, the youngest patient was 02 years of age and the oldest patient was 74 years old. The majority of patients affected were in the age group of 10 to 20 years (42%) followed by 21 to 30 years (23%). The least affected age group was 61 to 70 years (1%). There were 80 males and 20 females. The male-to-female ratio in the present study was 4:1.In the present study, neck swelling was present in all cases (100%). Fever was the second most common symptom in 72 cases (72%), followed by loss of weight in 61 patients (61 %), malaise in 21 patients (21%), loss of appetite in 45 patients (45%), cough in 25 cases (25%) difficulty in swallowing in 10 patient (10%), and change in voice was present in 05 (5%) respectively (Table 1).

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Table 1: Distribution of cases of cervical lymphadenopathy according to presenting complaints.

Sr. No.	Presenting Complaint	No. of Cases	Percentage
1	Neck Swelling	100	100%
2	Fever	72	72%
3	Cough	25	25%
4	Loss of appetite	45	45%
5	Difficulty in Swallowing	10	10%
6	Loss of Weight	61	61%
7	Malaise	21	21%
8	Change in Voice	5	5%

Table 2: Distribution of cases of cervical lymphadenopathy according to etiology.

Sr. No	Etiology	No. of Cases	Percentage
1	Tuberculosis	50	50%
2	Reactive Lymphadenitis	34	34%
3	Metastatic	6	6%
4	Chronic Non-Specific Lymphadenitis	7	7%
5	Unknown Primary	2	2%
6	Non-Hodgkins Lymphoma	1	1%
	Total	100	100%

Table 3: Distribution of cases of cervical lymphadenopathy in different etiologies according to gender.

Sr. No.	Gender	TBCL		RL		MET		CNSL		UP		NHL	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Male	36	36%	15	15%	5	5%	5	5%	1	17%	1	1%
2	Female	14	14%	19	19%	1	1%	2	2%	1	1%	0	0.00%
	Total	50	50%	34	34%	6	6%	7	7%	2	2%	1	1%

Table 4: Sensitivity and specificity of FNAC in the diagnosis of tuberculous lymphadenitis.

Sr. No.	FNAC	Tuberculous cervical LNP		Total
		Positive	Negative	
1	**Positive**	35	0	35
2	**Negative**	15	50	65
	Total	50	50	100

In the present study out of 100 cases of cervical lymphadenopathy 91 cases (91%) were non-neoplastic and 9 cases (9%) were neoplastic. Tuberculosis was found to be the most common cause of cervical lymphadenopathy in 50 cases (50%) followed by reactive lymphadenitis in 34 cases (34%), chronic nonspecific lymphadenitis in 7 (7%) case and metastatic lymphadenopathy in 6 cases (6%), Other causes were unknown primary in 2 cases (2%) and non-Hodgkin's lymphoma in 1cases (1%) (Table 2). Tuberculous lymphadenitis, metastasis, chronic lymphadenitis, and non-Hodgkin's lymphoma are more common in males than females. Unknown primary have equal incidence in males and females while reactive lymphadenitis is more common in females than males. The sensitivity of FNAC in the diagnosis of tuberculosis was found to be 85% whereas specificity was found to be 100% (Table 5).

DISCUSSION

Various tumors can metastasize to the sites of cervical lymph nodes, complicating the diagnosis and treatment of cervical lymph node metastasis from unknown primary sites. This retrospective study summarized the effects of different treatment regimens on prognosis to provide a guide for clinical treatments. Cervical lymph node metastasis from unknown primary sites is common in men aged 55–65 years [6]. Approximately 40% of the initial symptoms were painless masses [7]; 30–50% of lesions metastasized to levels II and I/III and 10–20% to levels IV/V [8]. The local control ratio approximates 37–

91%, and the 5-year survival rate ranges from 16% to 81% [9]. In this single-center study, we showed that pathological grade, treatment models, and distant metastasis had critical effects on prognosis. These data were similar to the results of previous studies [10]. Treatments of occult carcinoma metastatic to cervical lymph nodes remain controversial [11], however, overwhelming evidence has shown that neck metastasis is the focus of clinical treatment [12]. Studies have shown that treatment options must be developed according to lymph node metastasis sites, nodal status, and pathological type [13]. Our further analysis of treatments limited to different nodal status indicated that simple radiotherapy or surgery is superior to systemic combination therapy at the early stage. Interestingly, there was no obvious difference in prognosis between patients who underwent simple surgery and radiotherapy [14]. Patients with locoregional failure may have more aggressive cancer. In our series, the younger individuals generally had better prognoses than the older ones; however, they had no advantages in terms of local recurrence. Notably, the local recurrence rate was significantly associated with OS. This effect was not obvious in the univariate analysis, partly because local failure usually indicates a high probability of distant metastasis with interaction influence, as proposed by a previous study [15].

Advancements in radiation techniques and surgery have changed the failure pattern for patients with distant metastasis [16]. Most patients with distant metastases had a poor prognosis; however, previous studies have not systematically analyzed the treatments of distant metastasis [17]. We found that induction chemotherapy alongside surgery or radiotherapy improved long-term survival, which may be partly caused by a decrease in the risk of developing remote spread. Radiotherapy has an important role in the preservation of cervical function and treatments of potentially hidden primary tumors, except the elimination of primary tumors [18]. However, whether patients should receive double-sided radiation remains controversial. Our findings suggested that induction chemotherapy alongside surgery or radiotherapy is more advantageous than single surgery or radiotherapy, particularly in advanced disease [19]. Consequently, we recommend induction chemotherapy for patients with advanced disease who are more likely to have a distant transfer. These findings were supported by previous studies which argue that chemotherapy can improve the local control rate and reduce the risk of distant metastasis therefore, it can relieve symptoms of advanced malignancy [20].

CONCLUSION

Cervical lymph node involvement from remote primary tumors represents advanced-stage disease. The goals of treatment are to improve quantity and quality of life, and the choice of treatment depends on the tumor histology, the extent of disease, as well as consideration of patient comorbidities, functional status, and treatment preferences. Multidisciplinary care cancer team environment and case-by-case discussion should provide optimal treatment recommendations, including consideration for surgery, radiotherapy, chemotherapy, hormonal, or biological therapy, as well as recommending palliative care when and where appropriate.

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