An Audit of 138 Patients Admitted with Lump in the Neck in Surgical Department of Services Hospital Lahore, (SIMS)

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Abstract

Introduction: Neck swellings are very common problem in head and neck region. Causes are highly variable, ranging from simple treatable disease to a metastatic incurable carcinoma. The common causes may differ depending upon the different geographical location, gender and age of the patients. Therefore, the knowledge of local causative factors is important to avoid diagnostic delay. Commonly presenting head and neck masses are due to lymph node, thyroid and salivary gland enlargement. In third world countries, infective causes are most common. Malignant neoplasms were the second most common group. Therefore, frequent audit is necessary for prompt diagnosis and further work up.

Objective: An audit of 138 patients admitted with neck swelling in surgical department of a tertiary care Hospital of Lahore.

Methodology: This cross-sectional study was carried out at Department of Surgery, (unit-1) Services Institute of Medical Sciences Lahore, (SIMS) during January 2014 to July 2015. All patients who presented with neck swelling during study period were included. Diagnosis made after taking clinical history, examination and relevant laboratory work up.

Results: Out of 138 patients with lump in the neck, 93 (67.39%) were female and 45 (32.60%) were male. The commonest swelling is tuberculous lymphadenitis that is 34 (24.63%) and 9 (6.52%) were lymphoma and 4 (3%) with reactive hyperplasia. 49 (35.5%) arose from thyroid (40 benign and 9 malignant). Among the benign swellings, 15 were solitary nodular goiter, 12 were Multinodular goiter and 13 were diffuse thyroid goiter, 11 were Thyroglossal cyst. Other causes included sebaceous cyst 12 (8.69%), lipoma 19 (13.67%), thyroglossal cyst 11 (8%) and carcinoma of thyroid 9 (6.52%)

Conclusion: The most common cause of neck lump is thyroid disease and tuberculous lymphadenitis. Early diagnosis of tuberculosis and goiter is crucial for appropriate management.

Keywords: Head and Neck Swellings, Lymph Nodes, Tuberculous lymphadenitis, Goiter

Introduction: Neck swellings are very common problem in head and neck region. Causes vary, ranging from simple treatable disease to a metastatic incurable carcinoma. The common causes may differ depending upon the different geographical location, gender and age of the patients. Knowledge of local causative factors is important to avoid diagnostic delay[1]. Commonly presenting head and neck masses are due to lymph node, thyroid and salivary gland enlargement. In third world countries, infective causes are most common. Malignant neoplasms were the second most common group[2]. Tuberculous lymphadenitis is a chronic granulomatous infection caused by *Mycobacterium TB* and less frequently by ingestion of *Mycobacterium bovis* infected unpasteurized cow's milk or by other atypical mycobacloteria[3]. Tuberculosis (TB) is a large-scale health hitch with 8 million citizens infected yearly and 3 million people dying from TB related complications. The frequency of TB in underdeveloped nations is snowballing, and this is believed to coexist with poor hygiene environments and increased occurrence of acquired immunodeficiency syndrome[4].Tuberculous lymphadenopathy is the most common extra-pulmonary form of tuberculosis and cervical lymph nodes are the most commonly affected groupof nodes[5]. Cervical lymph node may also enlarge due to lymphoma, sarcoidosis and other viral and bacterial infections of head, neck, throat and face. Goiter is a common swelling in the neck resulting from an enlarged thyroid gland.[6] The term is also used to describe an enlarged thyroid[7].Thyroid gland disorders include autoimmune thyroid diseases (AITD), thyroid goiter, nodular and cancer. Worldwide, over 90% of goiter are due to iodine deficiency[8].Almost one-third of the world's population lives in areas of iodine deficiency[9]. In areas where the daily iodine intake is <50 μg, goiter is usually endemic, and when the daily intake falls <25 μg, congenital hypothyroidism is seen. Populations at particular risk usually lives in remote, mountainous areas in South-East Asia, Latin America and Central Africa. Iodization programmes are of proven value in reducing goiter size and in preventing goiter development and cretinism in children. Autonomy can develop in nodular goiters leading occasionally to thyrotoxicosis, while iodization programmes in some case may also induce thyrotoxicosis, especially in those aged >40 years with nodular goiters[10].Fekmales are affected 6 times more than male, probably due to female estrogen and prolactin hormone[11].Evaluation of the neck lump must be approached in a thorough and disciplined manner. A complete history and physical examination[12], staining for acid fast bacilli (AFB), thyroid function tests & fine needle aspiration cytology (FNAC) are helpful, in obtaining early diagnosis.

Methodology: The objectives of this study were

1. To document the diagnosis of neck lump based upon history, and clinical examination and laboratory finding.
4. To identify age and sex incidence ratio.

This cross-sectional study was conducted at Departments of Surgery of Services Hospital Lahore, from January 2014 to July 2015 after taking permission and approval from Ethical committee and head of surgical department (SIMS). All patients with swelling in the neck for at least two months were selected from surgical department. We looked at the

patients' files, operation theatre records, pathology reports and laboratory investigations of patients admitted with neck swelling. We also recorded age, gender and diagnosis.

Results:

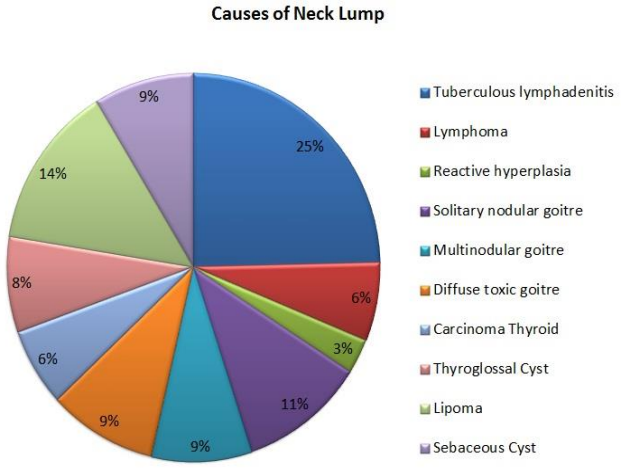
138 patients were admitted with neck swelling during study period. Age ranges from 14 years to 65 years. Of these, 93 were female and 45were male patients. The commonest (n=34, 24.63%) neck swelling is tuberculous lymphadenitis followed by lymphoma (n=9, 6.52%) and reactive hyperplasia (n=4, 3%).

Table:1Gender distribution and Mean age of patients.

Diseases	Total	Male	Female
Tuberculous lymphadenitis	34 (24.63%) Mean age 22	12 (8.69%) Mean age 18	22 (16%) Mean age 21
Lymphoma	9 (6.52%) Mean age 32	6 (4.34%) Mean age 35	3 (2.17%) Mean age 28
Reactive hyperplasia	4 (3%) Mean age 26	2 (1.44%) Mean age 21	2 (1.44%) Mean age 23
Solitary nodular goiter	15 (10.86%) Mean age 43	4 (3%) Mean age 33	11 (8%) Mean age 42
Multinodular goiter	12 (8.69%) Mean age 29	3 (2.17%) Mean age 37	9 (6.52%) Mean age 41
Diffuse toxic goiter	13 (9.42%) Mean age 32	3 (2.17%) Mean age 41	10 (7.69%) Mean age 35
Carcinoma thyroid	9 (6.52%) Mean age 47	2 (1.44%) Mean age 46	7 (5%) Mean age 43
Thyroglossal cyst	11 (8%) Mean age 31	3 (2.17%) Mean age 26	8 (5.79%) Mean age 24
Lipoma	19 (13.76%) Mean age 29	8 (5.79%) Mean age 31	11 (8%) Mean age 25
Sebaceous cyst	12 (8.69%) Mean age 24	2 (1.44%) Mean age 21	10 (7.69%) Mean age 27
Total	**138 (100%)**	**45** (32.60%)	**93** (67.39%)

The origin of swelling was thyroid in 49(35.5%) patients, these thyroid swelling was benign in 40patients while malignant in 9 patients. Among the benign swellings, 15 (10.8%) were solitary nodular goiter, 12 ((8.69%)) were multinodular goiter and 13(9.42%) were diffuse thyroid goiter, while 11 (8%) were thyroglossal cyst. Other causes include sebaceous cyst 12 (8.69%), lipoma19 (13.67%), thyroglossal cyst 11 (8%) and carcinoma of thyroid 9 (6.52%).

Table: Causes of Neck Lump



Discussion: Neck lump is a common clinical problem. Family physicians frequently encounter neck lump in adult patients[13]. Large number of these lumps are malignant while in third world countries these lumps has infective etiology[14] especially tuberculosis[15], in either case prompt diagnosis and early treatment are very important. The patient's age and the size and duration of the lump are the most significant predictors of neoplasia[16].In the west, 75% of lateral neck mass in patient over 40 years of age are caused by malignant tumors, and the incidence of neoplastic cervical adenopathy continues to increase with age. Hence in the absence of overt signs of infection, a lateral neck mass is metastatic squamous cell carcinoma or lymphoma until proved otherwise. The primary tumor can be detected in 50% of patients by clinical examination alone and in a further 10-15% by panendoscopy of the upper aerodigestive tract[17].Although approximately one third of metastases from Unknown Primary Source (UPS) are found in lymph nodes[18], the incidence of neck nodes from UPS makes up only 1.7%-5.5% of all head and neck carcinomas in large published series[19-21].Over 90% of neck metastases comprises squamous cell carcinoma (SCC)[22]. In one large series of 8500 patients with head and neck neoplasms diagnosed over a 10-yearperiod, 475 had presented with isolated lateral neck masses[2]. Overall, 190 patients (40%) in this subset had metastatic squamous cell carcinoma from unknown primary sites, 188 (39.5%) had lymphoma, and the remainder had either benign disease (n=78, 16.5%), sarcoma (n=10, 2%), or chemodectomas (n=9, 2%). Fine needle aspiration biopsy is an accurate, sensitive, inexpensive, and rapid technique that can be performed in the clinic, whereas excisional and incisional biopsy of cervical metastases results in a 2-3 times increased incidence of local treatment failure when compared with fine needle aspiration cytology. In a study done at

Ahmedabad, India, out of 100neck lumps, 51 arose from lymph nodes (55% tuberculousand17% malignant), 20 from thyroid, 15 from salivary glands and 8 from other soft tissues[23].

Another study from Agroha, India including 350 fine needle aspiration cytology (FNAC)from neck swelling showed that 53% arose from lymph nodes (36% tuberculous, 32% each malignant and reactive) 20% from thyroid and rest from variety of conditions[14].

A similar study done at Muhammad Medical College Mirpurkhas between 01-01-2008 to 27- 09-2010 showed that 39.6% arose from thyroid and 30.2% from lymph nodes. Those arising from thyroid 28.6% were malignant, while those from lymph nodes were mainly tuberculous (75%) while 12.5% were malignant.

Conclusion: The most common cause of neck lump is thyroid disease and tuberculous lymphadenitis. Early diagnosis of tuberculosis and goiter are very important for proper management of underlying diseases.

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