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The increasing phenomena of cervical lymphadenopathy and relations to malignant and chronic diseases in Assiut and Sohag populations

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Abstract

Background and aim: the phenomena of enlarged cervical lymph nodes is considered as a major disease related to chronic and malignant conditions in Sohag and Assiut populations. The aim is to clarify the most common etiology of cervical lymphadenopathy especially the catastrophic malignant and chronic cases

Patients and methods: This study was conducted at the surgical departments in both Al-Azhar university, Assiut branch and Sohag university hospital, over 2 years period (February,2013 – January, 2015) to 146 patients [84 male (58%) and 62 female (52%)] between ages of 5 months and 80 years with enlarged cervical lymph node. All the patients were subjected to routine history and investigations, and after the results of histopathology, the patients were divided into two groups, Group I, included the benign cases and group II, the malignant cases.

Results: this study were conducted on 146 patients [84 male (58%) and 62 female (52%)] all cases had enlarged cervical lymph node. Group I, the benign conditions were 48 patients, while group II the malignant cases were 98 patients. Group I showed that the highest incidence is tuberculosis (14.58%) of cases, nonspecific enlargement were (45.83%), and (4.66%) had Epstein Barr virus. While in the malignant Group II, (71.42%) Lymphoma were the most common, metastatic lymphadenitis were (20.4%) and (2.04%) secondary to thyroid malignancy.

Conclusion: chronic specific lymphadenitis especially Tuberculosis and malignancy are common in chronic cervical lymphadenopathy in Assiut and Sohag populations. That necessitate the need for special protocol for diagnosis and management of that cases.

Keywords: chronic cervical lymphadenopathy, lymphadenitis, malignant cervical lymphadenopathy, persistent cervical lymph nodes

1. Introduction

Enlarged cervical lymphadenopathy is a common condition in the clinical practice of both the surgeons and physicians. Easy accessibility of acquiring a sample for cytological or histological examination has made it an important component of practices of the pathologists as well. Even though, (Handa *et al*., 2012). There are still many situation, where excision biopsies is mandatory, especially in suspected cases of lymphoproliferative disorders. Recent literature also cites a study on the role of ultrasound (US) guided core biopsy in the diagnosis and typing of lymphoma in the head and neck region (Burke *et al*., 2011) [1].

Lymphadenopathy refers to any disease process involving lymph nodes that are abnormal in size and consistency. This condition has multiple etiologies, the most common of which are infection, neoplasia, and autoimmune diseases. Histological examination and surgical consultation are, however, often required to assist in the diagnosis and treatment of patients who do not respond to initial therapy or in whom there is an index of suspicion for a neoplastic process (Rajasekaran and Krakovitz, 2013) [8].

Lymphadenopathy is the most common cause of swelling in the neck and is one of the commonest presentations in inflammatory and neoplastic disorders. Etiological diagnosis of enlarged lymph nodes is of importance to the clinician as well as to the patients. Diagnosis is a simple, quick, inexpensive and is equally reliable procedure which can be used for diagnosis of lymphadenopathy. The human lymph nodes are susceptible to pathologic and physiologic changes and can, very commonly, be the first hallmarks of a disease. (Rajasekaran and Krakovitz, 2013) [8]. In the recent literature, there are a number of publications from all over the world on lymph node pathology, in the form of reviews, original articles and case reports and a literature review on enlarged neck lymph nodes (Burke *et al*., 2011) [1].

2. Patients and Methods

The study was carried out at the surgical departments in both Al-Azhar university hospital Assiut branch and Sohag university hospital, over two years period (February,2013 – January, 2015) to 146 patients [84 male (58%) and 62 female (52%)] between ages of 5 months and 80 years. For the patient to be included in the study should have the following criteria, enlarged cervical Lymph nodes for 2 or 3 weeks at least, take antibiotics therapeutic test, and give consent either from the patient himself or taken from his relative if the patient is child.

The history from the patients was as important as it can predict the diagnosis of the case, history of teeth or gum infection, pharyngitis or otitis media predicts acute cervical lymphadenitis, whereas longstanding history gave malignant possibilities.

From all the routine investigations ESR and Ultrasound were the most important. Ultrasound used to show the site, size and follow up the case and show if it respond to antibiotic therapeutic test and subside or not,

Whenever malignancy is suspected, chest imaging to look for metastasis or other lymph nodes in the mediastinum. Excisional biopsy sent to
Histopathology to identify the diagnosis. FNAC did to some patients but in fact the open biopsy is still superior to FNAC as it maintain the architecture of the tissue, also keep the integrity of the capsule of lymph nodes. After the result of histopathology; the patients were divided into two groups, Group I, included the benign conditions and group II the malignant conditions as shown in table 2. Some cases needed further investigations after the diagnosis has been confirmed, either to detect the sequela of the disease, to find distant metastasis in cases of malignancy or to focus on the primary cause, as thyroid cancer. Treatment of all cases then started unless already subsided by the antibiotic therapeutic course and followed up according to their own department, as cancer institute in malignant cases and chest hospital in patients with cervical tuberculosis.

3. Results

The study was carried out at surgical departments in both AL - Azhar university hospital Assiut branch and Sohag university hospital, over two years period (February,2013 – January, 2015) to 146 patients [84 male (58%) and 62 female (52%)] between ages of 5 months and 80 years. All the patients had the criteria mentioned before in patients and methods, (Table 1) shows the representation of all cases into age groups of ten years, sex and its percentages.

Table 1: Illustrating the age groups of all patients, sex and its percentages

Age group (years)	Male cases	Female cases	Total	Percentage
0.5 – 10	11	9	20	13.69%
11 – 20	12	10	22	15.06%
21 – 30	11	8	19	13.01%
31 -40	14	10	24	16.43%
41 -50	14	9	23	15.75%
51-60	12	8	20	13.69%
61 – 70	7	5	12	18.21%
71 -80	4	3	7	4.79%
Total	84 (58%)	62 (52 %)	146	

This study was conducted on 146 patients [84 male (58%) and 62 female (52%)]. Group I, the benign conditions were 48 patients, while group II the malignant cases were 98 patients. Group I showed that (14.58%) tubercular lymphadenitis. 10 patients (20.38%) had lymph node abscess; 2 patients (4.66%) had Epstein Barr virus, (45.83%) were hyperplastic lymph nodes. 3 children (6.25%) had post tuberculous vaccination lymphadenitis. (2.02%) were secondary to moniliasis. While in the malignant Group, (71.42%) were Lymphoma and (2.04%) were Leukemic Lymphadenopathy. (2.04%) secondary to thyroid malignancy. (20.4%) were metastatic malignancy, 1 case (1.02) was due to nasopharyngeal carcinoma, 1 case (1.02) showed malignant germ cell tumor, also 1 case (1.02) was lymphohistiocytosis. (Table 2) show the results of diagnosis, number of each case and their percentage according to either benign or malignant cervical lymph nodes.

Table 2: show the results of diagnosis, number of each case and their percentage according to either benign or malignant cervical lymph nodes.

Benign or Malignant	Diagnosis	No.	Percentage
Benign n.=48	Tuberculosis	7	14.58%
	Lymphoproliferative abnormalities	2	4.66%
	After tuberculous vaccination	3	6.25%
	Castleman disease	1	2.08%
	Epstein-Barr virus	2	4.66%
	Lymph node absces	10	20.83%
	Nonspecific hyperplasia	22	45.83%
	due to Monilia	1	2.08%
Malignant n. 98	Hodgkin and non–Hodgkin lymphoma	70	71.42%
	Metastatic disease	20	20.4%
	Leukemia	2	2.04%
	Nasopharyngeal carcinoma	1	1.02%
	Thyroid cancer	2	2.04%
	Rhabdomyosarcoma	1	1.02%
	Malignant germ cell tumor	1	1.02%
	lymphohistiocytosis	1	1.02%

4. Discussion

Cervical lymphadenopathy is a common presentation in most cases, the primary care and hospital setting. (Pizzo *et al*., 2014) [6]. The initial approach to determining the cause of cervical lymphadenopathy includes thorough history-taking and complete physical examination (van den Brekel, *et al*., 2010) [9]. However, if the initial investigation does not reveal the cause of cervical lymphadenopathy, the physician has

difficulty in determining immediate excision biopsy or observation. However, it is impossible to perform the excision biopsy for all cases of pediatric cervical lymphadenopathy. (Qadri *et al*., 2012) [7]. FNAC is developing into a feasible option in diagnosing pediatric neck masses. In addition, the use of flow cytometry and immunocytochemistry has been developed over the time period studied, and now is used regularly with FNAC in the diagnosis of lymphoma (Park, *et al*,. 2011) [5]. This result may be due to sampling errors, lack of adequate material, or difficulty in distinguishing reactive cells from malignant cells (Nolder, *et al*., 2013) [4]. However, the pediatricians required us to perform the excision biopsy, because the patient had symptoms, laboratory test results, and physical examination results consistent with malignant lymphoma. (Karadeniz, *et al*., 2012) [3]. In addition, we demonstrate the importance of joint decision-making between surgeons and pediatricians to determine the necessity of excision biopsy (J. Wang, *et al*., 2010) [2].

5. Conclusion

Chronic specific lymphadenitis especially Tuberculosis and malignancy are common in chronic cervical lymphadenopathy in assiut and sohag populations. That must give alarm to the physicians either surgeon, pediatricians or ENT physicians to put in mind the worst possibilities if they confronted with a case of enlarged cervical lymph nodes and start investigations, further management and follow up. Also the need for special protocol to deal with similar cases.

6. References

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