

“Clinical Profile and Histopathological Pattern of Cervical Lymphadenopathy: A Study in Dhaka Medical College Hospital, Dhaka, Bangladesh”

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Abstract: A total of 115 consecutive patients having cervical lymphadenopathy both inpatient and outpatient department in the above mentioned hospitals were enrolled in this study to see the clinicopathological correlation. Almost one third (29.6%) patients belonged to age 21-30 years and the mean age was found 42.1 ± 15.6 years. The association between age with histological findings it was observed that lymphoma was found 27.6% in patients belonged to age 41-50 years, tuberculosis 14(43.8%) patients belonged to age 21-30 years, metastatic carcinoma was 10(41.7%) patients belonged to age 51-60 years, nonspecific lymphadenopathy 11(45.8%) patients belonged to age 21-30 years. Male to female ratio was 2.59:1. More than three fourth patients were married. More than one fourth, patients were laborer, one third were businessman, and others were housewives, student, and unemployed. More than half of the patients came from lower class and others from middle class family. Regarding the clinical feature of the study patients, it was observed that majority patients had nonspecific symptom like generalized weakness, loss of appetite and weight loss, other features like fever, cough and headache also present in less number. Examination cervical lymph node observed that most of the lymph node was non tender, discreet in character, firm in consistency and mobile. On the other hand lymph nodes fixed in metastatic carcinoma and matted in tuberculosis. On systemic examination, it was observed that splenomegaly and hepatomegaly were the common finding followed by ascites. Organomegaly was frequently seen lymphoma while ascites in metastatic cases. More than three fourth of the patients had normal findings in CXR P/A view followed by features of consolidation, features of effusion, bilateral hilar shadow and features of fibrosis. Hemoglobin level showed most patients were anaemic. Erythrocyte sedimentation rate were also high in most of the patients. Total count of WBC of the study patients were within normal limit. FNAC of lymph node was done in 45 cases and among them tuberculosis was found 21(46.7%), lymphoma 8(17.8%), metastatic carcinoma 8(17.8%), nonspecific lymphadenopathy 6(13.3%) and others were 2(4.4%). Biopsy of lymph node was done in 70 cases among them 21(30.0%) patients had lymphoma, 18(25.7%) had nonspecific lymphadenopathy, 16(22.9%) had metastatic carcinoma, 11(15.7%) had tuberculosis. Diagnosis of study patients by histopathology and other relevant investigations finally observed that 34(29.6%) patients had tuberculosis, 29(25.2%) had lymphoma, 24(20.9%) had metastatic carcinoma, 14(12.2%) had nonspecific lymphadenopathy. Other less common diagnosis were Systemic lupus erythematosus, Kikuchi's diseases, Sarcoidosis, Sinus histiocytosis, Inflammatory lesion and Papillary carcinoma of Thyroid.

Key words: Clinical profile, Histopathological pattern, cervical lymphadenopathy

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I. Introduction

Cervical lymph node enlargement is common clinical finding in medical practice¹. Enlargement of lymph node may result from proliferation of lymphocytes intrinsic to the lymph node either due to infection or due to lymphoproliferative disorder or from the migration & infiltration of nodal tissue by either extrinsic inflammatory cells or metastatic malignant cells (American Academy of Pediatrics, 2003). Cervical lymphadenopathy may be due to Infections, Malignancy, Autoimmune diseases, Miscellaneous/unusual conditions, and iatrogenic causes (Bazemore and Smucker, 2002). Any failure to decrease in size of lymph node within 10-14 days of treatment, a need for further evaluation is indicated (Buchino & Jones, 1994; Dajani et al. 1963). The most common cause of cervical lymphadenopathy is reactive hyperplasia resulting from an infectious process, most commonly a viral upper respiratory tract infection (Peters & Edwards, 2000). Upper respiratory

tract infection might be caused by rhinovirus, Parainfluenza virus, influenza virus, respiratory syncytial virus, coronavirus, adenovirus, or reovirus. Other viruses associated with cervical lymphadenopathy include Epstein-Barr virus (EBV), cytomegalovirus, rubella, rubeola, varicella-zoster virus, herpes simplex virus (HSV), coxsackievirus, and human immunodeficiency virus (HIV). Bacterial cervical lymphadenitis is usually caused by group A β -hemolytic streptococci or *Staphylococcus aureus*. Anaerobic bacteria can cause cervical lymphadenitis, usually in association with dental caries and periodontal disease. Group B streptococci and *Haemophilus influenzae* type b are less frequent causal organisms. Diphtheria is a rare cause. *Bartonella henselae* (cat scratch disease), atypical mycobacteria, and mycobacteria are important causes of subacute or chronic cervical lymphadenopathy (Spyridis, Maltezou, & Hantzakos, 2001). Chronic posterior cervical lymphadenitis is the most common form of acquired toxoplasmosis and is the sole presenting symptom in 50% of cases (Leung & Robson, 1991). More than 25% of malignant tumors in children occur in the head and neck, and the cervical lymph nodes are the most common site (Leung & Robson, 1991). During the first 6 years of life, neuroblastoma and leukemia are the most common tumors associated with cervical lymphadenopathy, followed by rhabdomyosarcoma and non-Hodgkin's lymphoma (Leung & Robson, 1991). After 6 years, Hodgkin's lymphoma is the most common tumor associated with cervical lymphadenopathy, followed by non-Hodgkin's lymphoma and rhabdomyosarcoma. Pandav et al. (2012) conducted a study to determine demographic profile of cervical lymphadenopathy among Indian population and found that 83/219 (38%) cases were of tubercular lymphadenitis, 52/219 (24%) cases show Metastatic tumours, 49/219(22%) hyperplastic lymph nodes, 24/219 (11%) acute lymphadenitis, 8/219 (3.7%) Lymphoma and 3/219 (1.4%) were Leukemic Lymphadenopathy. Tubercular lymphadenopathy was found with increasing frequency through adolescence (43.30%) to young adulthood (54.75%) & (48.18%) in adulthood. 67/219 (30.59%) cases of tuberculosis were in age group of 11-40 yrs. 39/219 (17.8%) cases of metastatic tumors were in the age group of 31- 60 yrs. Highest incidence of metastatic malignancy was seen in the fifth decade (35%). In 2006 Yaris et al. performed a retrospective review of 126 patients in USA. Of the 126 patients 22.2% were found to have disease other than lymphadenopathy. Of those with lymphadenopathy, 76.6% had benign disease mostly belonging to acute lymphadenitis and 23.4% had malignancies. In a study performed by Ellison et al. in 1999 of 309 clavicular fine needle aspirations, they found that 55% of nodes sampled were malignant. Zeharia et al. (2008) performed retrospectively on 92 children diagnosed with atypical mycobacterial lymphadenopathy. The parents of all 92 children in this study opted for non-surgical and non-medical conservative management, and patients were followed for a minimum of 2 years. Clinical profile includes 80% of patients were less than 4 years old, 80% of patients had lymphadenopathy greater than 3cm in size, 90% of patients had unifocal lymphadenopathy, Lymphadenopathy was most commonly found in Submandibular (50%), Cervical (25%), Pre-auricular (10%) regions, 85% of patients had a positive PPD (>10mm), 90% of cases were due to *M. avium-intracellulare* and *M. haemophilum*, 97.4% of patients had a dominant node with purulent drainage for 3-8 weeks.

In Bangladesh, like all developing countries infectious diseases still prevail in high rate. Among all other diseases tuberculosis with all its variation in presentation and sensitivity to drugs is a major threat to our health care system. Cervical lymphadenopathy is a common presentation of tuberculosis in our country. with this existing load new deadly infections like HIV is gradually becoming a concern for us. Considering the versatile possibility of cervical lymphadenopathy ranging from no pathological etiology to malignancy, it is an utmost necessity to determine the pattern of etiologies in our population that is histologically proven and also to reveal the clinical presentation of cervical lymphadenopathy. The knowledge of this study would enable the physicians all over the country working at primary, secondary and tertiary care hospitals to consider a priority list of differential diagnosis while managing the patients with cervical lymphadenopathy taking into account the epidemiology of etiology among our population and associated clinical presentation

II. Objectives

General Objective:

- To observe the clinical profile and histopathological pattern of cervical lymphadenopathy in adults. Specific Objectives
- To describe the types of variations in clinical presentation of cervical lymphadenopathy.
- To observe the hematological profile & histopathological findings in these patients.
- To find out the etiological pattern of cervical lymphadenopathy.
- To describe the demographic characteristics of patient having cervical lymphadenopathy.

III. Methodology

This is a hospital based cross sectional observational study carried out in the Department of Medicine, Dhaka Medical College and Hospital (DMCH) during the period from March 2014 to November 2014. The patients having cervical lymphadenopathy both inpatient and outpatient department of Medicine, Dhaka Medical College Hospital, Dhaka. The patient presented with cervical lymphadenopathy in inpatient or outpatient

department of Medicine of Dhaka Medical College Hospital was screened on by duty physicians. Immediate Contact was done with mobile phone to study physician. The study physician immediately counseled the patient for enrollment after considering the inclusion and exclusion criteria. After enrollment in case of outpatient department detail history and physical examination was done to find out possible etiology. Routine blood test such as complete blood count, hemoglobin, erythrocyte sedimentation rate (ESR), Peripheral blood film, chest X-ray posterior anterior view, routine urine examination, random blood sugar was done. Most of the routine examination was done in Pathology, Haematology and Radiology and Imaging department of Dhaka Medical College Hospital. Data was collected in a pre-designed proforma. Patients’ information was obtained using information sheet which includes questionnaire, clinical findings and investigation findings. Statistical analyses were carried out by using the Statistical Package for Social Sciences version 20.0 for Windows (SPSS Inc., Chicago, Illinois, USA). Continuous variables were expressed as mean, standard deviation, and categorical variables as frequencies and percentages with 95% CI. Chi-Square test was used to analyze the categorical variables, shown with cross tabulation. ANOVA test was used to analyze the continuous variables, shown with mean and standard deviation. P values <0.05 was considered as statistically significant. Prior to the commencement of this study, the research protocol was approved by the Dhaka Medical College ethical review committee. The aims and objective of the study along with its procedure, alternative diagnostic methods, risk and benefits was explained to the patients in easily understandable local language and then informed written consent was taken from each patient for all the patient of study intending enlisting. It was assured that all records would be kept confidential and the procedure would be helpful for both the physician and patients in making rational approach regarding management of the case. A separate written informed consent obtained from each patient before performing FNAC and biopsy

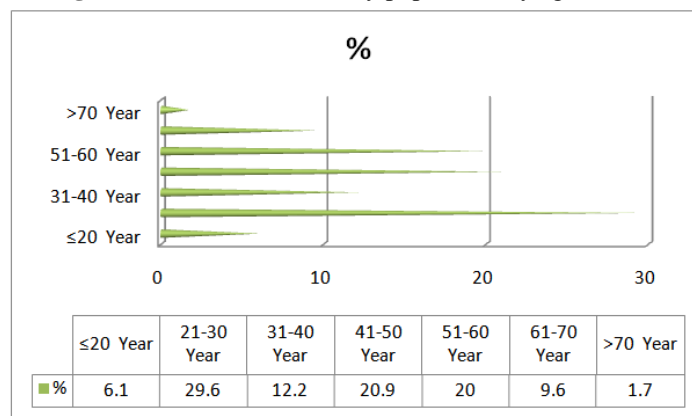
Inclusion criteria: Patients aged 18 years and above, Patients having cervical lymphadenopathy >1.0 cm in diameter, Patients presented in outdoor and indoor, department of medicine, Dhaka Medical College and Hospital, Duration of cervical lymphadenopathy ≥14 days (subjective and objective).

Exclusion criteria: Patient with insignificant lymph node enlargement, e.g. <1.0 cm in cervical regions, The patients who refuse to give consent, A diagnosed case of lymphadenopathy, In those patient where FNAC/ biopsy is contraindicated, such as leukaemia.

IV. IV Observation and Results

This cross sectional observational study was carried out with an aim to describe the types of variations in clinical presentation, demographic characteristics, hematological profile & histological findings and etiological pattern of patient having cervical lymphadenopathy. A total of 115 patients presented with cervical lymphadenopathy both inpatient and outpatient department of Medicine in Dhaka Medical College Hospital, during March 2014 to December 2014, were included in this study. Patients aged ≥18 years, presented with cervical lymphadenopathy >1.0 cm in diameter, duration of cervical lymphadenopathy more than 14 days (subjective and objective) was enrolled in this study. Patients aged less than 18 years, extremely debilitated patient, patient with insignificant lymph node enlargement, e.g. <1.0 cm in cervical regions, patients who refuse to give consent, known case of lymphadenopathy and patients suggestive of haematologic malignancy were excluded from the study. The present study findings were discussed and compared with previously published relevant studies. The result of present study is as follows.

Figure I: Distribution of study population by age (n=115)



Mean±SD: 42.1±15.6, Range: 19-80

Table I: Distribution of study population by age (n=115)

Characteristics	Number of patients		Percentage
	Sex		
Male	83		72.17
Female	32		27.83
Total	115		100
Occupation			
Laborer	31		27.0
Business	27		23.5
Housewife	20		17.4
Student	17		14.8
Service	11		9.6
Unemployed	9		7.8
Socio-economic Class			
Low Socioeconomic status	57		49.6
Middle Class	56		48.7
Higher Class	2		1.7

Table II: Distribution of study population by clinical presentation (n=115).

Clinical feature	Number of patients	Percentage	95% CI	
			Lower	Upper
Generalized weakness	105	91.3	86.15	96.5
Weight loss	102	88.7	82.91	94.5
Loss of Appetite	98	85.2	78.71	91.69
Fever	90	78.3	70.77	85.83
Headache	38	33.3	24.69	41.9
Cough	37	32.2	23.66	40.74
Sputum production	26	22.60	14.96	30.2
Alteration of bowel habit	11	9.6	4.22	15.0
Haemoptysis	5	4.3	0.59	8.0
Joint pain	4	3.5	0.14	6.9
Jaundice	2	1.8	-0.63	4.2

Table III: Distribution of positive clinical symptoms by histopathological findings (n=115)

Positive clinical symptoms	Histopathological findings										P value	
	Lymphoma (n=29)		Tuberculosis (n=32)		Metastatic carcinoma (n=24)		Nonspecific lymphadenopathy (n=24)		*Other (n=6)			
	n	%	n	%	n	%	n	%	n	%		
Generalized weakness	Present	28	96.6	31	96.9	23	95.8	21	87.5	2	33.3	0.001s
	Absent	1	3.4	1	3.1	1	4.2	3	12.5	4	66.7	
Appetite	Present	1	3.4	0	0.0	0	0.0	15	62.5	1	16.7	0.001s
	Lost	28	96.6	32	100.0	24	100.0	9	37.5	5	83.3	
Weight loss	Present	29	100.0	30	93.8	22	91.7	19	79.2	2	33.3	0.001s
	Absent	0	0.0	2	6.3	2	8.3	5	20.8	4	66.7	
Cough	Present	8	27.6	14	43.8	9	37.5	5	20.8	1	16.7	0.327ns
	Absent	21	72.4	18	56.3	15	62.5	19	79.2	5	83.3	
Sputum	Present	3	37.5	13	92.9	6	66.7	4	80.0	0	0.0	0.037s
	Absent	5	62.5	1	7.1	3	33.3	1	20.0	1	100.0	
Alteration of bowel habit	Present	0	0.0	0	0.0	9	37.5	2	8.3	0	0.0	0.001s
	Absent	29	100.0	32	100.0	15	62.5	22	91.7	6	100.0	
Haemoptysis	Present	0	0.0	3	9.4	2	8.3	0	0.0	0	0.0	0.235ns
	Absent	29	100.0	29	90.6	22	91.7	24	100.0	6	100.0	

Table IV: Distribution of positive sign by histopathological findings (n=115)

Positive sign	Histopathological findings										P value	
	Lymphoma (n=29)		Tuberculosis (n=32)		Metastatic carcinoma (n=24)		Nonspecific lymphadenopathy (n=24)		Other (n=6)			
	n	%	n	%	n	%	n	%	n	%		
Liver	Palpable	15	51.7	3	9.4	9	37.5	5	20.8	0	0.0	0.001 ^s
	Not palpable	14	48.3	29	90.6	15	62.5	19	79.2	6	100.0	
Spleen	Palpable	23	79.3	8	25.0	0	0.0	7	29.2	0	0.0	0.001 ^s
	Not palpable	6	20.7	24	75.0	24	100.0	17	70.8	6	100.0	
Ascites												

Present	2	6.9	2	6.3	9	37.5	2	8.3	0	0.0	0.002 ^s
Absent	27	93.1	30	93.8	15	62.5	22	91.7	6	100.0	

Table V: Distribution of study population by investigations (n=115)

CXR P/A view	Number of patients	Percentage
Normal Study	88	76.5
Features of Consolidation	8	7.0
Features of effusion	4	3.5
Collapse of lung	4	3.5
Bilateral hilar shadow	4	3.5
Features of Fibrosis	4	3.5
Features of Cardiomegaly	2	1.7
Patchy opacity	1	0.9
Hb% (gm/dl)		
<7	3	2.6
7-11	100	87.0
12-16 (normal)	12	10.4
Mean±SD	9.8	±1.6
Range (Min,max)	4.7	,15
ESR (mm in 1st hour)		
<15	1	0.9
15-100	98	85.2
>100	16	13.9
Mean±SD	73.5	±27.4
Range (Min,max)	10	,150
		Cont.
Total count (/mm³) of WBC		
<4000	1	0.9
4000-11000 (Normal)	89	77.4
>11000	25	21.7
Mean±SD	9126.4	±3761.9
Range (Min,max)	4000	,20000

Table VI: Distribution of study population by FNAC (n=45)

FNAC	Number of patients	Percentage
Tuberculosis	21	46.7
Lymphoma	8	17.8
Metastatic carcinoma	8	17.8
Nonspecific lymphadenopathy	6	13.3
Others	2	4.4

Table VII: Distribution of study population by biopsy (n=70)

Biopsy	Number of patients	Percentage
Lymphoma	21	30.0
Nonspecific lymphadenopathy	18	25.7
Metastatic carcinoma	16	22.9
Tuberculosis	11	15.7
Kikuchi’s disease	3	4.3
Others	1	1.4

Table VIII: Comparison between final diagnosis and histopathological report (n=115)

Final diagnosis	n	Lymphoma	Tuberculosis	Metastatic carcinoma	Nonspecific lymphadenopathy	Other
Lymphoma	29	29	0	0	0	0
Tuberculosis	34	0	32	0	2	0
Metastatic carcinoma	24	0	0	24	0	0
Nonspecific lymphadenopathy	14	0	0	0	14	0
Kikuchi’s disease	3	0	0	0	0	3
Systemic lupus erythematosus	4	0	0	0	3	1
Reactive lymphadenopathy	2	0	0	0	2	0
Sarcoidosis	2	0	0	0	2	0
Sinus histiocytosis	1	0	0	0	0	1
Inflammatory lesion	1	0	0	0	0	1
Papillary carcinoma of thyroid	1	0	0	0	1	0
Total	115	29	32	24	24	6

V. Discussion

Our finding here is like other studies that introduce “B” symptoms useful and important factor in approach to lymphadenopathy (Zahir and Azimi 2009). We could not find any significant relationship between cough and histopathological findings but in case of sputum production, Tuberculosis, Metastatic diseases and

nonspecific cases were significantly higher than other groups. In similar studies we could not find any result about this factor effect. Alteration of bowel habit is significantly higher in Metastatic carcinoma than other groups. This may be due to origin of primary carcinoma in intestine. There is also no study result about this factor. Another important presenting complaint was fever which is significantly higher in case of Tuberculosis, Lymphoma, and in nonspecific lymphadenopathy. In most of the cases fever was significantly low in grade. Other less common presenting complains were headache, joint pain, haemoptysis, jaundice etc. There is no relevant finding in other similar studies about these factor effects. Regarding the clinical findings of cervical lymph node it was observed that lymph node were significantly non tender in all groups except group that include other etiologies. Tender lymphadenopathy was due to the etiology of acute necrotizing lymphadenitis which was grouped as others and in metastatic cases which may be due to rapid enlargement of lymph node. Lymph nodes were usually matted in case of Tuberculosis then other groups, which is also significant. It is supported by study done by Ismail & Muhammad (2013) and Jha et al. (2001). In our study it shows that Metastatic lymph nodes were usually fixed to underlying structure and consistency was hard than others. But most of the other group's consistency of the lymph node was firm. Similarly, in our country a study done by Miah (2007) observed 50 cases and found that 92.0% lymph nodes were firm. In this present series it was observed that in systemic examination splenomegaly and hepatomegaly was significantly higher in case of lymphoma than other groups. Ascites was significantly higher in case of Metastatic carcinoma. This finding indicates that lymphoma patients usually presented in advanced stage with hepatosplenomegally. Similarly Miah (2007) mentioned in his study about presence of hepatomegaly and splenomegaly in lymphoma patient. A total of 45 patients underwent FNAC in this study and it was observed that among them tuberculosis ranked on the top (46.7%). In our country Biswas et al. (2013) study showed that the tubercular lymphadenitis was (45.4%), which is similar to our study. Another study done by Pandav et al. (2012) found that 38.0% cases were of tubercular lymphadenitis which also consistent with our study. In our FNAC series next common case was lymphoma in 17.8% patients. which is consistent (about 17% of lymphoma cases) with study done by Ageep (2012) but it is not consistent with study done by Biswas et al. (2013) where lymphoma case is 7% ,which may be duo to common practice of biopsy in suspected case of lymphoma. Metastatic carcinoma 17.8%, was next to lymphoma, this finding is similar to Biswas et al. (2013) 21.2% and also Pandav et al (2012) 24%. Nonspecific lymphadenopathy in our series was 13.3% that is also similar with Biswas et al. (2013) 19.9% but more in Pandev et al. (2012) 22%. It may be due to inclusion of only adult patient in our study. In this present series a total of 70 patient underwent lymph node Biopsy and it was observed that 30.0% patients had lymphoma, in our country Miah (2007) showed lymphoma cases were (28%), another study done in Saudi Arabia by Albasri et al. (2014) which shows number of lymphoma were 24.6% which is similar to our study and according to Olu-Eddo & Ohanaka (2006) lymphoma cases were 23%. In this series the second leading cause of lymphadenopathy were nonspecific lymphadenopathy (25.7%), In India Mohan et al. (2007) showed nonspecific lymphadenitis cases were 35.6%. In our country Rahman et al. (2013) observed nonspecific cases were 31.8% in his study. In both this study number of nonspecific cases were little bit higher than our study. The reason behind this may be both this study involves all age's patient and our study done only on adult patients. In this series the next cause is metastatic carcinoma (22.9%). Study done by Miah (2007) showed metastatic carcinoma were 20% which is similar to our study, in another study by Olu-Eddo & Ohanaka (2006) observed 26.5% patients had metastatic carcinoma but in Bangladesh the study done by Rahman et al. (2013) observed only 11.2% cases were metastatic neoplasm; .this disparity may be due to difference in inclusion of patients as both our study and the previous two studies were done on referral hospital and the Rahman's study was done on outpatient basis. One of the rare diseases like Kikuchi-Fujimoto was diagnosed in 3(4.3%) patients in our setting. Similar findings were observed in a study in India by Mohan et al. (2007), which was 2.1%. The final Diagnosis of study patients were observed as follows 29.6% patients had tuberculosis, 25.2% lymphoma, 20.9% metastatic carcinoma, 12.2% nonspecific lymphadenopathy, and others (3.5% Systemic lupus erythematosus, 2.6% Kikuchie's disease, 1.7% Reactive Lymphadenopathy, 1.7% Sarcoidosis, 0.9% Sinus histocytosis, 0.9% Inflammatory lesion and 0.9% Papillary carcinoma of thyroid). In this series it was observed that almost one third (29.6%) patients with cervical lymphadenopathy were in 3rd decade, followed by 20.9% in 5th, 20.0% in 6th. The mean age was 42.1±15.6 years varied from 19 to 80 years. Similarly, in our country, Rahman et al. (2013) obtained in their study that the age of the patients varied from 2 to 85 years and most of the patients were in the 3rd decade (17.8%) followed by 4th decade (19.6%) and 2nd decade (17.8%) of life. Majority of the patients (61.7%) were between 11-40 years of age. In other studies; Khan et al. (2011) observed almost similar age range in their study where they found age range varied from 10 to 75 years with mean age 36.52 ± 17.37 years; Umer et al. (2009) reported maximum patients were in the age group of 21-30 years; Pandav et al. (2012) mentioned that maximum numbers (21.0%) of cases were in age grouping of 21-30 years; Naeimi et al. (2009) found that mean age was 47.07 years with a range of 8–81 years; Ellison et al. (1999) showed the average was 46.7 years, with a range from 3 to 93 years and a median of 49 years - which is closely resembled with the present study.

Regarding the association between age with histological diagnosis it was observed in this study that lymphoma was 27.6% in 5th decade, another study done by Albasri et al (2014) showed mean age of lymphoma patient were 41.75 which is similar to our study. Miah (2007) also showed Lymphoma predominate in middle age patient group. In Biswas et al. (2013) study similar findings were revealed lympho-proliferative disorders were found to have a predilection for the middle and younger people, mean age for this group was significantly lower than that for the group having secondary deposits. In this series it was found that metastatic carcinoma were 41.7% in 6th decade, Rahman et al. (2013) mentioned that malignant lesions were common in the older age. In other studies; Shakya et al. (2009) found that Highest incidence of Cancer was seen in 5th decades (50.0%); Ageep (2012) shows 90% of the malignant cases were in age group of 50 to 70 years; Pandav et al. (2012) also showed Highest (35.0%) incidence of metastatic malignancy was seen in the 5th decade; Khajuria et al. (2006) reported in their study that 88% of metastasis lymph nodes were found over 40 years of age; Biswas et al. (2013) showed secondary cancers were 72.5% and among them 86.2% were in more than 40 years of age whereas primary carcinoma of lymph node involved all age – which show similarity with our study. Tuberculosis was predominant in 3rd decade 43.8%, in this series, similarly in our country Miah (2007) showed that tuberculosis predominate in younger age group (75%). In another study Pandav et al. (2012) obtained that Tubercular lymphadenopathy increasing frequency through adolescence 43.30% to young adulthood 54.75% and 48.18% in adulthood. Shakya et al. (2009) found that tubercular lymphadenopathy increasing frequency through childhood 10.5% and adolescence 21.7% to young adulthood 30.4%. Khajuria et al (2006) showed tuberculosis of lymph nodes in 2nd and 3rd decades were (58.9%). Biswas et al. (2013) observed median age for the patients having tubercular lymphadenitis was 20 years with a range of 4–55 years. Nonspecific lymphadenopathy was found 45.8% in 3rd decade in this series. Biswas et al. (2013) study had similar findings. In this present series it was observed that more than three fourth (77.4%) of the patients were married. Almost three fourth (72.17%) of the patients were male. Male female ratio was 2.59:1, which indicates that sex distribution revealed male predominance.

Regarding the CXR P/A view it was observed in this current series that more than three fourth (76.5%) of the patients had normal findings 7.0% had features of consolidation, 4.4% features of effusion, 4.4% bilateral hilar shadow and 4.4% had features of fibrosis. These findings indicate the importance of chest x ray for differential diagnosis of patients presented with cervical lymphadenopathy. In this present study it was observed that most (87.0%) of the patients were anaemic (Hemoglobin level belonged to 7-11 gm/dl) and severe anaemia (<7 mg/dl Hg) were present 3(2.6%) cases. Among the 3 cases two were metastatic carcinoma and one was tuberculosis. It was also observed that 85.2% of the patients had high Erythrocyte sedimentation rate (15-100 mm in 1st hour), and 13.9% had shown very high (>100 mm). Total count of the WBC in more than three fourth (77.4%) of the patients were within normal limit. Observation from the above haematological investigation reveals that these test may not be very helpful in diagnosis of cervical lymphadenopathy.

VI. Limitations of the study

The study population was selected from one selected hospital in Dhaka city, so that the results of the study may not be reflect the exact picture of the country. The present study was conducted at short period of time.

Small sample size was also a limitation of the present study. Therefore, in future further study may be under taken with large sample size. The series includes only adult cases, which is a limitation to express the results regarding whole population.

VII. Conclusion and Recommendations

From this study, it is concluded that cervical lymphadenopathy is a common clinical problem and the commonest cause was tuberculosis followed by lymphoma and metastatic carcinoma. There were sufficient etiopathological and clinical features that differentiate age groups with lymphadenopathy. For evaluation of lymphadenopathy we should consider important signs and symptoms like “B” symptoms, consistency, fixity of lymph node and organomegaly. Lymph nodes were fixed in metastatic carcinoma and matted in case of tuberculosis. It will help the care giver doctor, especially at primary care level, to think in a systematic way for detection of respective cases early and thereby avoiding the diagnostic delay in cases like Tuberculosis and Malignancy. It can be of very helpful of the urban and rural primary health care levels, where in places improved diagnostic facility to detect lymph node diseases is yet to be available due to scarcity of resources. Further studies can be undertaken by including large number of patients.

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