

## Clinical and Aetiological Pattern of Cervical Lymphadenopathy in Bangladesh

Md. Mahabur Rahman Sarker<sup>1\*</sup>, Khorsed Alam<sup>2</sup>, Moniruzzaman Mollah<sup>1</sup>, AHM Touhidul Alam<sup>3</sup>

<sup>1</sup>Assistant Professor, Dept. of Pediatric Surgery, Shaheed Ziaur Rahman Medical College, Bogura, Bangladesh.

<sup>2</sup>Resident, ENT Department, Dhaka Medical College and Hospital, Dhaka, Bangladesh.

<sup>3</sup>Professor of Surgery, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh.

### ABSTRACT

**Objective:** In this study our main aim is to evaluate clinical and aetiological pattern of cervical lymphadenopathy in Bangladesh.

**Method:** This cross-sectional analytical study was done Total 260 patients with cervical lymphadenopathy, persisting for >2 weeks either localized or generalized attending inpatient and outpatient department (particularly surgical, medical, pediatrics, ENT, dermatology) of Dhaka Medical College Hospital, from July 2009 to December 2011.

**Result:** In the majority (85%) of patients had anorexia followed by 76.5% fever, 69.2% weight loss, 34.6% cough, 15% pain, 7.7% haemoptysis, 4.6% discharging sinus, 2.6% change of voice and 2.3% dysphagia. Of the 82 patients diagnosed as metastatic carcinoma (by tissue diagnosis), the commonest primary site was lung (41.5%) followed by stomach (14.6%), thyroid (12.2%), nasopharynx and oral cavity (each 7.3%), breast 4.9%, testes 2.4%. In 9.8% of the cases the primary site was not discovered.

**Conclusion:** From our result, we can conclude that, anorexia, fever and weight loss were common clinical feature in tuberculosis, secondary metastasis and lymphoma. Further study is needed for better outcome.

**Keywords:** Clinical, Etiology, Cervical Lymphadenopathy.

### \*Correspondence to:

**Dr. Md. Mahabur Rahman Sarker,**  
Assistant Professor,  
Department of Pediatric Surgery, Shaheed Ziaur Rahman  
Medical College, Bogura, Bangladesh.

### Article History:

Received: 04-02-2020, Revised: 27-02-2020, Accepted: 21-03-2020

### Access this article online

|  |  |
|--|--|
| Website:<br><a href="http://www.ijmrp.com">www.ijmrp.com</a> | Quick Response code<br> |
| DOI:<br>10.21276/ijmrp.2020.6.2.004                          |  |

### INTRODUCTION

Cervical lymphadenopathy refers to lymphadenopathy of the nodes. The term lymphadenopathy strictly speaking refers to disease of the lymph nodes<sup>1</sup>, though it is often used to describe the enlargement of the lymph nodes. Similarly, the term lymphadenitis refers to inflammation of a lymph node, but often it is used as a synonym of lymphadenopathy.<sup>2</sup>

Cervical lymphadenopathy is a sign or a symptom, not a diagnosis. The causes are varied, and may be inflammatory, degenerative, or neoplastic.<sup>3</sup> In adults, healthy lymph nodes can be palpable (able to be felt), in the axilla, neck and groin.<sup>4</sup> In children up to the age of 12 cervical nodes up to 1 cm in size may be palpable and this may not signify any disease.<sup>5</sup> If nodes heal by resolution or scarring after being inflamed, they may remain palpable thereafter.<sup>6</sup> In children, most palpable cervical lymphadenopathy is reactive or infective. In individuals over the age of 50, metastatic enlargement from cancers (most commonly squamous cell carcinomas) of the aerodigestive tract should be considered.<sup>7</sup>

In this study our main aim is to evaluate clinical and aetiological pattern of cervical lymphadenopathy in Bangladesh.

### OBJECTIVE

#### General Objective

- To evaluate clinical and aetiological pattern of cervical lymphadenopathy in Bangladesh.

#### Specific Objectives

- To detect clinical presentation of the patients
- To identify various lymphadenopathy in different groups of cervical lymph nodes.

### METHODOLOGY

**Type of Study:** Cross sectional analytical study.

**Place of Study:** In and out patient Departments of Dhaka medical college hospital, Dhaka.

**Study Period:** July 2009 to December 2011.

**Study Population:** Total 260 patients with cervical lymphadenopathy, persisting for >2 weeks either localized or generalized attending inpatient and outpatient department (particularly surgical, medical, pediatrics, ENT, dermatology) of Dhaka Medical College Hospital, Dhaka.

**Sampling Technique:** Purposive

**Inclusion Criteria**

- Cases presented with cervical lymphadenopathy were included in this study and subsequent underwent FNAC or lymphnode biopsy.
- Cervical lymphadenopathy persisting >2 weeks.
- Both sexes of variable ages.

**Method:** Detailed history was taken and thorough physical examination with careful attention to the involved lymph nodes and its draining area was done. All the information was recorded in a fixed protocol.

**Statistical Analysis:** Collected data was collated and appropriate statistical analysis was done using SPSS (Statistical program for scientific study) package

**RESULTS**

Table 1 shows gender distribution of the patients where male to female ratio was 1:1.2.

In table 2 shows age distribution of the patients where most of the patients belong to 11-20 years.

**Table 1: Gender distribution of the patients**

| Gender | %   |
|--------|-----|
| Male   | 48% |
| Female | 53% |

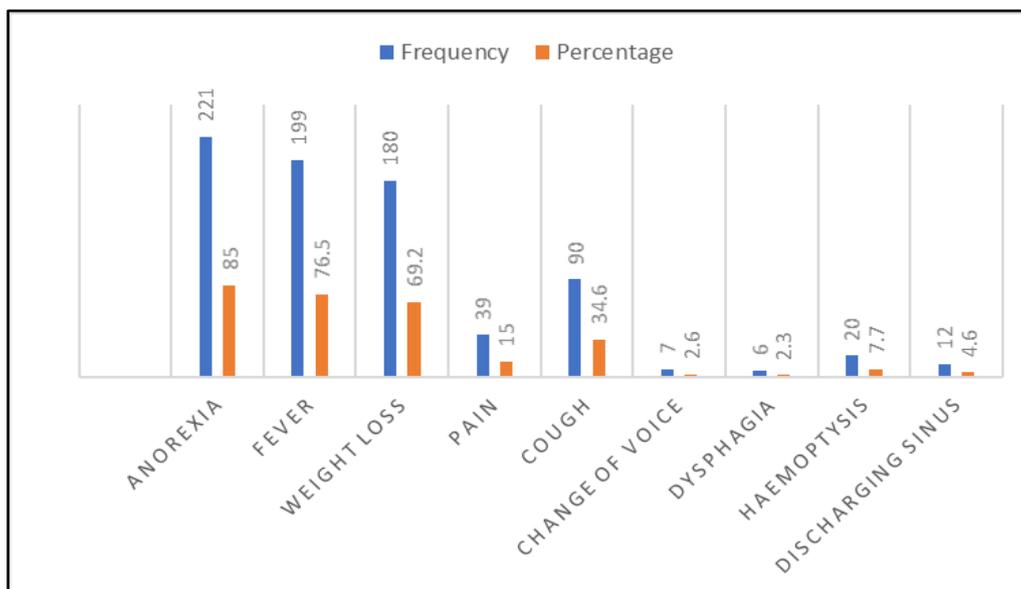
**Table 2: Distribution of patients according to age group (n=260)**

| Age group (years) | Total (n=260)<br>No. (%) | Tuberculosis (n=113)<br>No. (43.5%) | Metastatic carcinoma (n=82)<br>No. (31.5%) | Lymphoma (n=44)<br>No. (16.9%) | Nonspecific reactive change (n=21)<br>No. (8.1%) |
|-------------------|--------------------------|-------------------------------------|--|--------------------------------|--|
| 0-10              | 13 (5.0)                 | 7 (53.8)                            | 2 (15.3)                                   | 4 (30.7)                       | 0  |
| 11-20             | 66 (25.4)                | 36 (57.1)                           | 4 (7.1)                                    | 21 (28.6)                      | 5 (7.1)  |
| 21-30             | 65 (25.0)                | 34 (52.0)                           | 5 (8.0)                                    | 16 (24.0)                      | 10 (16.0)  |
| 31-40             | 34 (13.1)                | 15 (31.3)                           | 10 (50.0)                                  | 1(2.9)                         | 8 (18.8)   |
| 41-50             | 36 (13.8)                | 3 (7.7)                             | 26 (76.9)                                  | 6 (15.4)                       | 1(2.8)   |
| >50               | 46 (17.7)                | 18 (10.0)                           | 22 (60.0)                                  | 14 (10.0)                      | 2 (20.0)   |

**Table 3: Distribution of various lymphadenopathy in different groups of cervical lymph nodes (n=260)**

| Lymph node groups           | Total (n=260)<br>No. (%) | Tuberculosis (n=113)<br>No.(%) | Metastatic carcinoma (n=82)<br>No.(%) | Lymphoma (n=44)<br>No.(%) | Nonspecific reactive change (n=21)<br>No.(%) |
|-----------------------------|--------------------------|--------------------------------|---------------------------------------|---------------------------|--|
| Submental and submandibular | 29 (11)                  | 18 (62)                        | 8 (6.7)                               | 1 (5.3)                   | 2 (27.3)                                     |
| Anterior cervical           | 45(17.3)                 | 20(32.5)                       | 12(66.7)                              | 5(52.6)                   | 8(72.7)                                      |
| Posterior cervical          | 141(54)                  | 39(87.5)                       | 2(6.7)                                | 98(78.9)                  | 2(18.2)                                      |
| Supra-clavicular            | 74 (29)                  | 12 (10.0)                      | 56(86.7)                              | 4 (10.5)                  | 0  |

\* Total will not correspond to 100% for presence of multiple group of lymphadenopathies.



**Figure 1: Clinical presentation of the patients**

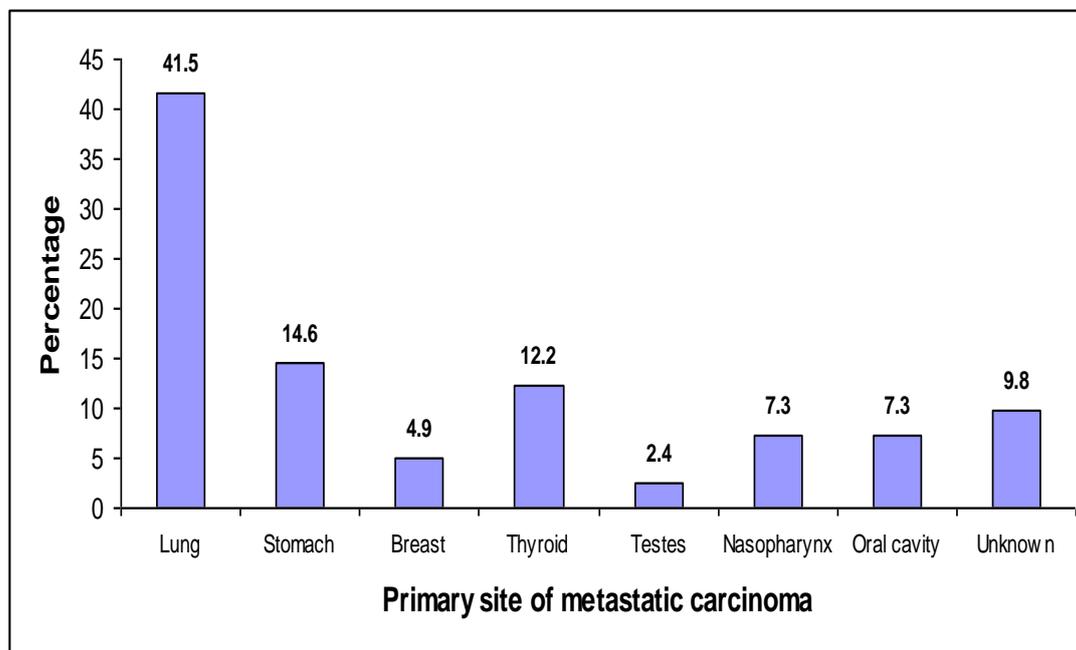


Fig. 2: Primary site of metastatic carcinoma

In figure 1 shows clinical presentation of the patients where majority (85%) of patients had anorexia followed by 76.5% fever, 69.2% weight loss, 34.6% cough, 15% pain, 7.7% haemoptysis, 4.6% discharging sinus, 2.6% change of voice and 2.3% dysphagia.

In table 3 shows distribution of the cervical lymph nodes where posterior cervical nodes were involved in more than half of the cases (54.2%) followed by supraclavicular (28.5%), anterior cervical (17.3%) and submental and submandibular nodes (11.2%).

In figure 2 shows primary site of metastatic carcinoma. Of the 82 patients diagnosed as metastatic carcinoma (by tissue diagnosis), the commonest primary site was lung (41.5%) followed by stomach (14.6%), thyroid (12.2%), nasopharynx and oral cavity (each 7.3%), breast 4.9%, testes 2.4%. In 9.8% of the cases the primary site was not discovered. Sometimes cervical lymphadenopathy may not be obvious & warrant through search for primary site e.g. Lung, Thyroid, Nasopharynx, previously excised skin lesion, Testis.

## DISCUSSION

Clinical presentation in this series besides cervical lymphadenopathy were anorexia (85.0%) pyrexia (76.5%), weight loss (69.2%). Anorexia, pyrexia and weight loss are the most common presenting features in tuberculosis, secondary metastasis and lymphoma.

Most of the involved lymph nodes were unilateral and multiple. Only lymphoma showed bilateral involvement. Mostly the tuberculous nodes were firm, matted and non-tender. Metastatic nodes were hard discrete and fixed and nodes in lymphoma were discrete, rubbery, mobile and non-tender. Posterior chain was found in present study to be commonly involved in tuberculosis and lymphoma. Supraclavicular lymph nodes were mainly involved by secondary metastasis.

In this series of cervical lymphadenopathy clinically found 59% patients diagnosed as tubercular, 27.7% metastatic, 12.7%

lymphoma and 5% NSRH. Accuracy of clinical diagnosis in compared with pathological findings in case of TB (50.38%), metastatic carcinoma (96.15%), lymphoma (96.15%) and NSRH (96.94%). Which is supported by several studies.<sup>6-7</sup>

Secondary metastasis is second to tuberculosis as the cause of cervical lymphadenopathy. In this study metastatic lymphadenopathy accounts 31.5% of cases. One study reported that, 33% cases.<sup>8</sup> other study reported 17.54% cases as secondary metastasis.<sup>9</sup> One report observed that, 21.3% cases.<sup>10</sup> Another report observed 25.7%.<sup>11</sup>

In contrast one study observed 14.9% cases, this is because their studies were conducted only to the patients admitted in the medical wards, whereas present study includes both inpatient and outpatient departments. One study said that, supraclavicular lymphadenopathy as highest risk of malignancy, estimated as 90% in older than 40 years of age.<sup>13</sup> Another report said that, 64% metastatic deposit in left supraclavicular gland.<sup>14</sup>

## CONCLUSION

From our result, we can conclude that, anorexia, fever and weight loss were common clinical feature in tuberculosis, secondary metastasis and lymphoma. Further study is needed for better outcome.

## REFERENCES

1. Kumar V, Abbas K, Fausto N; Robbins and Cotran Pathologic basis of disease. 7th edition. India. Elsevier. 2004:83.
2. Timothy R peter, Kathryn M Edwards; Cervical lymphadenopathy and adenitis, American Academy of pediatrics, Pediatric. Rev 2000; 21:399.
3. Leung Alexander KC, Robson, MW Lane. Childhood Cervical Lymphadenopathy. Journal of Paediatric Health Care. 2004; 18:3-7.
4. Oguz A, Karadeniz C, Timel EA, Citak EC, Okur FV. Evaluation of peripheral lymphadenopathy in children. Pediatric Hematol Oncol. 2006; 23:549-61.

5. Biswas PK, Begum KN, Tubercular cervical lymphadenopathy: Clinico-pathological study Of thirty cases, TAJ, 200720(1):36-8.
6. Ferrer R. Lymphadenopathy: Differential Diagnosis and evaluation. American Family Physician. 1998; 15:1313-20.
7. Hunter W. Two introductory lectures. In: His last course of anatomic lectures at His Theatre in Windmill Street. London: J Johnson, 1784.
8. Starling EH. On the absorption of fluid from the connective tissue spaces. J Physiol. London, 1986; 19:312.
9. Chessman AD, Holden HB, Richards AES. The neck. In: Mann CV, Russel RCG, editors. Bailey and Love's short practice of surgery. 23rd ed. ELBS with Chapman and Hall, 2000: 256-69.
10. Sabin, F.R. On the origin of the lymphatic system from the veins, and the development of the lymph hearts and thoracic duct in the pig. Am. J. Anat. 1902; 1:367-389.
11. Huntington, G.S & C.F.W. McClure. The anatomy and development of the jugular lymph sac in the domestic cat (*Felis domestica*). Am. J. Anat. 1910; 10:177-311.
12. Robin L Blain and Rodney E Mountain. Neck lumps. In: Essential surgical practice, Cuschieri SA. Steel RJC. Moossa AR. 4th edition. London Arnold. 2002:1045-1064.
13. Norman S. Williams, Christopher J. K Bulstrode, O Connell, P Ronan. Cervical lymphadenitis; Bailey & love's short practice of surgery, 25th ed. London, Arnold, 2008; 773.
14. Ferrer R. Lymphadenopathy: Differential diagnosis and evaluation. Am Fam Physicians. 1998; 58(6):1313-20.

**Source of Support:** Nil. **Conflict of Interest:** None Declared.

**Copyright:** © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882. This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Cite this article as:** Md. Mahabur Rahman Sarker, Khorsed Alam, Moniruzzaman Mollah, AHM Touhidul Alam. Clinical and Aetiological Pattern of Cervical Lymphadenopathy in Bangladesh. Int J Med Res Prof. 2020 Mar; 6(2):12-15.  
DOI:10.21276/ijmrp.2020.6.2.004