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RESEARCH ARTICLE

A CLINICO-PATHOLOGICAL EVALUATION OF CHRONIC CERVICAL LYMPHADENOPATHY

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ABSTRACT

This observational study was conducted on prospectively collected 50 cases of chronic cervical lymphadenopathy from Department of General Surgery, Al-Ameen Medical College, Bijapur during the period of October 2003 to February 2006. All patients were evaluated through detailed history, general physical examination, systemic examination and relative examinations. Data was analyzed with SPSS ver 10.0. Age ranging from 2-50 years with average age being 26.7 years, tuberculous adenitis 62%, chronic non-specific adenitis 28%, lymphoma 6%, secondary carcinoma 4%. Male:Female ratio 1:1.08. 72% of the patients were from rural area. Presenting symptom in all cases was swelling in the neck. Fever and cough was present in 54% cases. History of exposure to tuberculosis was seen in only 12% of the cases. Unilateral lymphadenopathy was seen in 92% of the patients. Upper anterior deep cervical lymphadenopathy was present in 40% of the cases. Radiological evidence of active pulmonary tuberculosis was seen in only 4% of the cases. FNAC is conclusive in 96% of the cases. To conclude, tuberculosis was the commonest cause cervical lymphadenopathy in both sexes and in urban and rural areas and FNAC is highly conclusive but biopsy is need in few cases.

INTRODUCTION

Presence of neck mass is a common condition which mostly accurse due to enlarged lymph nodes (Chau *et al.*, 2003). Lymphadenopathy is a term synonymously used with swollen /enlarged lymph nodes. Cervical lymphadenopathy is usually defined as cervical nodal tissue measuring more than 1 cm diameter .Based on duration, cervical lymphadenopathy is classified as acute lymphadenopathy (2 weeks duration), sub acute lymphadenopathy (2-6 weeks duration) and chronic lymphadenopathy which is considered as any lymphadenopathy that does not resolve by 6 weeks (Sambandan and Christeffi Mabel 2011). Chronic cervical lymphadenopathy may result from variety of different underlying diseases. An infection in the sinuses, respiratory tract throughout or elsewhere in the body can trigger cervical lymphadenopathy (Parisi and Glick 2005) even malignancy can also trigger lymph node swelling (Sambandan and Christeffi Mabel 2011). Presentations of enlarged cervical lymph nodes are mostly due to tuberculosis (Afridi *et al.*, 2005). The aim of present study was to find out most common cause of cervical lymphadenopathy – to analyze the incidence of tuberculosis in cervical lymphadenopathy and find out variables like age, sex distribution, the role of socio economic class, clinical assessment and investigations for the diagnosis

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MATERIALS AND METHODS

The present study was carried out by prospectively collected 50 cases of chronic cervical lymphadenopathy from the Department of General Surgery, Al-Ameen Medical College, Bijapur during the period of October 2003 to February 2006. In these patients, age group, sex distribution, socio economical class and incidence of tuberculosis in cervical lymphadenopathy were studied. History, clinical presentation and family history were recorded. Relative investigations were carried out which included Blood Picture, Erythrocyte Sedimentation Rate (ESR) and Chest X-Rays. FNAC was done for tissue diagnosis, and when FNAC was non-conclusive, other investigations like excision biopsies were done. Exclusion criteria included patients who were already diagnosed, on treatment and with relapses within 1 year of age and lymph node of size less than 1 cm. Data was collected, statistically analyzed and results were compared with computer program SPSS version 10.0.

RESULTS

In the present series, we studied the prospectively collected data of 50 patients with chronic cervical lymphadenopathy from the Department of General Surgery, Al-Ameen Medical College and Hospital, Bijapur, during the time from October 2003 to February 2006.

Table 1. Showing prevalence of various lesions responsible for cervical lymphadenopathy

S.No	Causes	No of patients	Percentage
1	Tuberculous adenitis	31	62
2	Chronic non specific adenitis	14	28
3	Lymphoma	3	6
4	Secoundary carcinoma	2	4

In the present series, tuberculous adenitis is the most common cause of cervical lymphadenopathy.

Table 2.

Age in years	No of cases	Percentage
2-10	7	14
11-20	9	18
21-30	12	24
31-40	17	34
41-50	5	10
Total	50	100

In the present series, this is commonly effects in fourth and third decade. With minimum age of two years and maximum age of 50 years, ranging from 2 -50 years with an average of 26.7 years.

Table 3. Demographic distribution

Parameters	Number	Percentage
1.Sex		
Male	24	48
Female	26	52
M:F ratio 1:1.08		
2.Income group		
Low income upto rs 600 permonth	37	74
Middle income rs 600-1500 per month	11	22
High income More than rs1500 per month	2	4
3.Urban/Rural		
Urban	14	28
Rural	36	72

Table 4. Incidence of cervical lymphadenopathy in rural areas

Area	Disease	Number	Percentage
Urban			
	a.tuberculous lymphadenitis	8	57.12%
	b.chronic non specific lymphadenitis	2	14.28%
	c.malignancy	4	28.56%
Rural			
	a.tuberculous lymphadenitis	23	63.71%
	b.chronic non specific lymphadenitis	12	33.24%
	c.malignancy	1	2.7%

DISCUSSION

In the present series, tuberculous adenitis is the common cause of cervical lymphadenitis with 31 (62%) cases followed by chronic non-specific lymphadenitis with 14 (28%) cases, lymphoma with 3 (6%) cases and secondary carcinoma with 2 (4%) cases. Study conducted by (Abdul Qayoom Daudpota *et al.,* 2013) shows tuberculous lymphadenitis 76.11%, reactive hyperplasia 11.67%, chronic non-specific lymphadenitis 8.89%, lymphoma 2.78%, metastasis to cervical lymph nodes 0.55%. While in the study conducted by Maharajan *et al.* (2009) causes of cervical lymphadenopathy were tuberculous lymphadenitis 54%, reactive hyperplasia 33%, and metastatic lymphadenopathy 11.1%. In the present series, the disease commonly affects in the fourth and third decades of life, 17 (34 %) cases and 12 (24%) cases respectively. While in the study conducted by Abdul Qayoom Daudpota *et al.* (2003), cervical lymphadenopathy is more common below 30 years of age with 68.88% and in above 30 years it is 31.12%, and in the study conducted by Abdul Haque Khan (2011) age ranged from 12 years to 85 years.

Table 5. History, clinical examination, Investigations and laboratory investigations

Parameter	Number	Percentage
Presenting symptoms		
a. Swelling in the neck	50	100
b. Fever and cough	27	54
c. Loss of weight and appetite	32	64
d. Dysphagia and pain in throat	5	10
e. Other symptoms involved	5	10
f. Other lymph nodes involved	2	4
History of exposure to tuberculosis		
a. Yes	6	12
b. No	44	88
Unilateral/Bilateral		
a. Unilateral	46	92
b. Bilateral with other groups involved	4	8
Clinical parameters of enlarged lymph nodes		
a. Firm, matted and mobile	13	26
b. Firm and discreet	30	60
c. Fluctuant without sinus	2	4
d. Rubbery and discreet	3	6
e. Hard in consistency	2	4
Affected group of lymph nodes		
a. Sub-mandibular and sub-mental	9	18
b. Upper anterior deep cervical	20	40
c. Upper posterior deep cervical	9	18
d. Lower anterior deep cervical	10	20
e. Lower posterior deep cervical	2	4
Investigations		
a. Radiological evidence of tuberculosis		
No evidence(normal)	48	96
Evidence of active tuberculosis	2	4
b. FNAC		
Conclusive	48	96
Non-conclusive	2	4
c. Open biopsy	2	4

In our study, there were 48 males and 52 females, while a study carried out by Agarawal *et al.* (2009) shows a female predominance and the study done by Abdul Haque Khan (2011) shows 60% females and 40% males as patients of cervical lymphadenopathy. In our study, both in urban and rural areas, tuberculous adenitis is the most common cause of cervical lymphadenopathy with malignancy being the least common cause and incidence of cervical lymphadenopathy due to tuberculosis is more in rural areas with 63.71%, than as compared to urban area with 57.12%. Most of the patients of cervical lymphadenopathy in our study belong to the poor socio-economical class and a similar observation was made previously made by (Abdul Qayoom Daudpota *et al.,* 2013; Ibrahim Mansoor and Sayed Abdul-Aziz 2002) which showed that 86.86% patients were also from the low socio-economical group. Family history and previous personal history are uncommon in most of the patients and a similar observation was made by (Abdul Qayoom Daudpota *et al.,* 2013; Ibrahim Mansoor and Sayed Abdul-Aziz 2002). In most of the cases, the presenting symptom was swelling in the neck and few of them had other constitutional symptoms which were not significant. According to Abdul Qayoom Daudpota *et al.* (2013) constitutional symptoms were present in 14% patients. A positive history of exposure to tuberculosis was uncommon in most of the cases (Ibrahim Mansoor and Sayed Abdul-Aziz 2002). In our study, unilateral lymph node involvement was

92% and 8% having bilateral lymph node involvement with other roots involved. Study by Abdul Qayoom Daudpota *et al*. (2013) shows that 4.4% patients have bilateral cervical lymphadenopathy. In our study, firm and discreet lymphadenopathy was present in 60%; firm, matted and mobile lymph nodes were present in 26%, fluctuate without sinus were present in 4%, rubbery and discreet lymph nodes were present in 6%, and lymph nodes which were hard in consistency was seen in 4 %. A study by Ibrahim Mansoor *et al.* (2002) showed that the consistency of enlarged lymph node varied; it was solid in 325 (79.6%) patients and cystic with sinus formation in 94 (22.4%) patients. In our study, upper anterior deep cervical lymph node enlargement was seen in 40% of the cases while lower anterior deep cervical lymph node enlargement was seen in 20% cases. Upper posterior deep cervical lymph node was seen in 18% cases. Sub-mandibular and sub- mental nodal involvement comprised of 18% cases and lower posterior deep cervical lymph nodal involvement was seen in 4% cases. Study conducted by Abdul Qayoom Daudpota *et al*. (2013) shows that the most common site for lymphadenopathy is posterior triangle of the neck. Deep cervical lymph nodes were enlarged in 75.4% and other cervical lymph nodes were comparatively less affected. In our study, only 4% of the patient showed evidence of active tuberculosis on radiology while Abdul Qayoom Daudpota *et al*. (2013) showed 3.64% cases having the same. Increased ESR was seen in 26.66% patients (Abdul Qayoom Daudpota *et al.*, 2013). FNAC is conclusive up to 96% in our study as compared to 87.77% in the study conducted by Maharajan *et al.* (2009). For the proper diagnosis of enlarged cervical lymph nodes, the excision biopsy couldn't be avoided (Choi *et al.*, 2009).

Conclusion

In conclusion, tuberculous lymphadenopathy is more prevalent among all causes of cervical lymphadenopathy in both sexes, in younger age group, urban and rural areas who belong to poor socio-economical class. Hematological investigations were non-conclusive is majority of cases. Diagnosis by FNAC was highly conclusive but lymph node biopsy was required in a few cases.

Author Contribution

Study Conception and Design: Jilani S. Awati
Critical Revision: Nishikant N. Gujar
Supervision: Salauddin A. Contractor
Drafting of Manuscript: Sayan Kumar Das
Acquisition of Data: Jilani Awati

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