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A Comprehensive Study of Cervical Lymphadenopathy with special reference to FNAC as a diagnostic Criteria

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Abstract
Cervical lymphadenopathy is a common clinical problem. This study was carried out in 50 cases without any consideration to age, FNAC was used to evaluate these patients, biopsy was done only in doubtful cases, in patients with lymphoma and in those with supraclavicular group involvement. Tuberculosis was seen most commonly in the age group of 11-20 years. The male:female ratio was 1:2.5 in tubercular lymphadenopathy. Accuracy rate of FNAC in this series as a whole is 96%. Lymphoma cases were seen in the age group of 31-40 years where as metastatic carcinoma was present in patients over 40 years. Matted lymph nodes were seen in 61.9% cases of tubercular lymphadenitis.
Keywords: *Tuberculosis, cervical lymphadenopathy, fine needle aspiration cytology (FNAC).*

Introduction

Lymph node enlargement is a very common problem. The commonest site is the enlargement of cervical nodes and the commonest cause of swelling in neck is lymphadenopathy[1,12]. The cause of cervical lymphadenopathy may be due to tuberculosis, chronic lymphadenitis, lymphoma or metastatic carcinoma.

This study was undertaken with an aim to find out the different causes of cervical lymphadenopathy and accuracy of FNAC in diagnosis of cervical lymphadenopathy, without any consideration of age and sex. In only doubtful cases, in patients with lymphoma, in supraclavicular group involvement, and in patients whose symptoms are not alleviated by therapy based on findings of FNAC after a period of 8 weeks were subjected to open biopsy.

Materials and Methods

This is a prospective study of 50 patients who attended the Surgery Outpatient Department of M.K.C.G. Medical College Hospital, Berhampur between the period of February, 2016 to January 2017. It includes patients with cervical lymphadenopathy of more than 4 weeks duration.

A detailed history was taken from each, patient regarding the duration of symptoms and the progress of theprocess. Any history of fever, cough, weight loss, anorexia, contact with tubercular person or previous history of tuberculosis was also noted.

All cases were examined with particular reference to site, surface, consistency, periadenitis, fixity to deeper structures and drainage area of the corresponding lymph nodes. A thorough examination of the scalp, oral cavity, indirect laryngoscopy and examination of ear was done. A per abdomen examination, and examination of genetalia was also done. A complete blood count, chest radiograph, mantoux test, were done in all cases. The diagnosis was confirmed by FNAC. When the first FNAC was inconclusive it was repeated for the second time. If the result was still inconclusive excision biopsy was done. The data thus collected was analysed for the various causes of lymphadenopathy, their age and sex distribution, character of the involved lymph nodes and the various groups involved.

Observation

Table-I Age Incidence

Age in Yrs.	TB Lympha-denopathy	Non-specific reactive Hyperplasia	Lymphomas	Metastatic Carcinoma	Total
0-10	1	0	0	0	1
11-20	9	1	0	0	10
21-30	4	2	3	1	10
31-40	5	3	4	1	13
>40	2	0	4	10	16

Table-II Sex incidence

Diseases	Male		Female		Total
	No.	%	No.	%	
TB Lymphadenopathy	6	28.6	15	71.4	21
Non-specific reactive hyperplasia	2	33.3	4	66.7	6
Lymphomas	4	36.4	7	63.6	11
Metastatic Carcinoma	7	58.3	5	41.7	12
Total	19	38	31	62	50

Table-Ill Character of enlarged lymph node

Character of lymph node	Tuberculous Lymphadenitis	Non-specific hyperplasia	Lymphoma	Metastatic carcinoma
Discrete	8	6	8	12
Matted	13	0	3	0
Sinus formation	0	0	0	0

Table-IV Accuracy of FNAC in the individual groups of lymphadenopathies

FNAC	No. of Cases	Based on H/P Examination				
		False Positive		False Negative		Accuracy %
		No.	%	No.	%	
TB Lymphadenopathy	19	0	0	2	9.5	90.5
Reactive hyperplasia	7	1	16.6	—	—	83.4
Hodgkin's lymphoma	5	—	—	—	—	100
Non-Hodgkin's lymphoma	6	—	—	—	—	100
Metastatic carcinoma	12	—	—	—	—	100
Inconclusive	1	_	_	_	_	_
Total	50	1	2	2	4	96.0

Results

In this series, 50 patients presented with chronic cervical lymphadenopathy. The various causes of cervical lymphadenitis and age incidence is shown in Table-I. Tuberculous lymphadenitis is the most common cause of cervical lymphadenopathy and is seen commonly in 2nd decade of life (11-20). The sex distribution is shown in Table-I I. There were 31 females and 19 males. 71.4% of female and 28.6% of males were found to have tubercular lymphadenopathy. FNAC was able to establish the diagnosis in 48 of the cases and biopsy was needed in only 2 cases that is in one case of false positive reactive hyperplasia and in one case where FNAC report was inconclusive. 61.9% of tubercular lymph nodes were matted where as in case of lymphoma 27.3% of nodes were matted.

Discussion

In this study tuberculosis was found to be most common cause of cervical lymphadenopathy 42% Gupta et al[2] found that in their 101 cases of cervical lymphadenopathy 50% had tuberculosis, a similar result was obtained by Jhawer et al[3] in their study, 64% of their 359 patients had tuberculosis. We found a female preponderance with an M:F ratio to be 1:2.5. This is in accordance with Dandapatetal[4]. Maximum incidence of tubercular cervical lymphadenopathy was in the age group of 11-20 years which corresponds to the findings of Trivedi &BasuMallick[5] and Pamraetal[6]. The percentage of matted nodes in this series was 61.9%. Seth etal[7] found matted nodes in 77% of tubercular lymphadenitis. In this study we have taken help of FNAC as diagnostic criteria, out of 50 cases FNAC could establish diagnosis in 96% of cases. Sardaetal[8] have obtained similar results in 97.5% of the patients. Therefore we would like to suggest that today with increasing role of FNAC it forms an important tool to aid in the diagnosis of cervical lymphadenopathy.

Conclusion

We conclude that tuberculosis is the most common cause of cervical lymphadenopathy[9]. Lymphoma was seen most commonly in patients during 4th decade and metastatic disease in patients greater than 40 years. The most common age group for tubercular cervical lymphadenopathy was 11-20 years[10]. FNAC is an easy, accurate, cost-effective, relatively painless, easily repeatable safe method and a reliable aid todiagnosis[11].

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