

**FNAC FINDINGS IN CHILDREN AGED 1-10 YEARS WITH CERVICAL LYMPHADENOPATHY**Bhatia Gunjan<sup>1</sup>, Bhatia Ravi<sup>2</sup>**HOW TO CITE THIS ARTICLE:**

Bhatia Gunjan, Bhatia Ravi. "FNAC findings in children aged 1-10 years with Cervical Lymphadenopathy". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 27, July 07; Page: 7435-7437, DOI: 10.14260/jemds/2014/2915

**ABSTRACT: INTRODUCTION:** Cervical lymphadenopathy is a common presenting complaint in the pediatric outdoor. Often it is a cause of concern for the parents and very often poses a diagnostic dilemma for the treating pediatrician. The study was planned with the aim of trying to find out an etiological cause for cervical lymphadenopathy. **MATERIAL AND METHODS:** 109 children who were referred to Arravali path labs for FNAC of cervical lymph nodes formed the basis of study. Detailed history was recorded in predesigned proforma, along with a general physical exam for each patient. FNAC was done by a pathologist. **RESULTS:** The predominant group of patients was in the 6-10 year age group with 60 cases. The commonest clinical symptom was swelling in the neck region (109 cases), loss of weight and appetite (54 cases), fever (45 cases). Reactive hyperplasia and tuberculosis lymphadenitis were the commonest cyto-pathological findings noted on FNAC. **CONCLUSION:** Infection remains the predominant cause of cervical lymphadenopathy among children in our country.

**KEYWORDS:** FNAC, Cervical Lymphadenopathy.

**INTRODUCTION:** Cervical Lymphadenopathy is a common presenting complaint in pediatric outdoor.<sup>[1]</sup> Often it poses a diagnostic dilemma for the treating pediatrician and is a very often a cause of concern for the parents. Enlargement of lymph node may result from proliferation of lymphocytes intrinsic to the lymph node or due to lymph proliferative disorder. Etiological profiles vary from country to country and in our nation tuberculosis continues to be the commonest cause of enlarged cervical lymph nodes in children. Fine needle aspiration cytology (FNAC) is a simple, safe, reliable and inexpensive method of establishing the diagnosis.<sup>[2]</sup> The aims of this study were to determine the causes of cervical lymphadenopathy in children aged between 1-10 years.

**METHODS:** A total of 109 children with significant cervical lymphadenopathy being referred for FNAC to Arravali path labs formed the study. Study was conducted from Jan 2011- Jan 2014. In each instance detailed history along with a general physical examination was done for each patient. The FNAC procedure was performed by a pathologist, using a 24G needle attached to a 20ml syringe. Multiple sites were aspirated. Smears were stained accordingly using Giemsa, Ziehl Neilsen and H&E stains.

**RESULTS:** Out of the 109 children in the study group, the predominant age group was 6-10 years with 60 cases (55%) followed by 49 cases (45%) in the age group 1-5 years. Out of the 109 children 70 were male (64%) and 39 were female (36%).

The common clinical symptoms observed were swelling in neck region in 109 cases (100%), followed by loss of weight and appetite in 54 cases (49.5%), ear discharge in 21 cases (19.2%), fever

## ORIGINAL ARTICLE

in 45 cases (41.2%). Out of 109 whose FNAC was carried out, in 3(2.75%) cases FNAC was inconclusive due unsatisfactory smears. Reactive hyperplasia and Tuberculous lymphadenitis were the commonest lesions noted on FNAC findings (Table 1).

Sl. No.	Cytological Diagnosis	Number of cases	Percentage
1.	Reactive Hyperplasia	55	50.4
2.	Tubercular Lymphadenitis	41	37.6
3.	Pyogenic lymphadenitis	8	7.30
4.	Hodgkin's Lymphoma	1	0.91
5.	Langerhan Histiocytosis	1	0.91
6.	Unsatisfactory Smears	3	2.75
		109	100%

**Table 1: Cytological Diagnosis of 109 cases of cervical lymphadenopathy**

Sl. No.	Age group	Males	Females
1.	1-5 years	30	19
2.	6-10 years	40	20

**Table 2: Gender wise distribution of Cases**

Generalized Lymphadenopathy was observed in 11 cases (10%). The jugulodiagastric group of lymph nodes was the commonly enlarged group of lymph nodes in our study.

Sl. No.	Site	No. of cases (%)
1.	Jugulodiagastric	50(45.8)
2.	Occipital	20(18.3)
3.	Posterior Auricular	10(9.1)
4.	Submandibular	10(9.1)
5.	Posterior Cervical	18(16.5)
6.	Supra Clavicular	1(0.91)

**Table 3: Sites of lymphadenopathy**

Sl. No.	Symptom	Cases	Percentage
1.	Swelling in Neck	109	100
2.	Loss of Weight and Appetite	54	49.5
3.	Ear Discharge	21	19.2
4.	Fever	45	41.2
5.	Cough	54	49.5
6.	Coryza	45	41.2

**Table 4: Symptom wise distribution of Cases**

## ORIGINAL ARTICLE

**DISCUSSION:** In our study we made an attempt to find out the cause of cervical lymphadenopathy in children. The commonest cytopathological finding in our study was Reactive hyperplasia followed by Tubercular lymphadenitis. Studies by Gupta et al, Eddy MP et al, Mishra SD et al, Khajuria R et al<sup>[3, 4, 5, 6]</sup> have also shown similar findings. In our study there is male predominance which is similar what is reported by Gupta et al.<sup>[3]</sup>

In the present study the predominant symptom was swelling in the neck followed by cough and loss of appetite. In studies by Eddy MP et al <sup>[4]</sup> the commonest symptom was swelling in neck followed by fever and cough. In study by Gupta et al <sup>[3]</sup> the commonest symptom reported was swelling in neck followed by loss of appetite and fever.

The technique of FNAC has been used extensively in diagnosis of Hodgkin's and Non Hodgkin's lymphoma.<sup>[2]</sup> There was one case of Hodgkin's lymphoma wherein FNAC proved useful. To determine the accuracy of FNAC, often the FNAC findings are correlated with histological findings of the tissue biopsy specimens. Our aim was to help the clinician arrive at an early diagnosis. FNAC serves not only as a mode to offer tissue diagnosis but also helps as a preliminary screening procedure for conditions like lymphoma, tuberculosis and metastases.<sup>[5]</sup>

### REFERENCES:

1. American Academy of Pediatrics: Tuberculosis. In 2003 Red Book: Report of Committee on Infectious Diseases, ed Pickering LK. American Academy of Pediatrics, IL 2003, 642-660.
2. Melcher D, Linehan J, Smith R. Fine Needle aspiration cytology. Recent advances in histopathology No.11, Churchill Livingstone, 1981, pp 263-280.
3. Gupta A, Tripathi V, Mangal Y, Agarwal A, Arya A. A clinic- etiological study of cervical lymphadenopathy in children with special reference to ultrasonography.
4. Eddy MP, MoorchungN, Chaudhary A. Clinico-Pathological profile of pediatric lymphadenopathy. Indian J Pediatrics 2002; 69: 1047-51.
5. Mishra SD, Garg BL. Etiology of cervical lymphadenitis in children. Indian Pediatrics 1972; 9: 812-5.
6. Khajuria R, Goswami KC, Singh K, Dubey VK. "Pattern of lymphadenopathy on Fine Needle Aspiration Cytology in Jammu". JK Science Vol. 8 No. 3, July- Sept 2006.

### AUTHORS:

1. Bhatia Gunjan
2. Bhatia Ravi

### PARTICULARS OF CONTRIBUTORS:

1. Consultant Pathologist, Department of Pathology, GBH American Hospital. Udaipur.
2. Assistant Professor, Department of Paediatrics, Pacific Medical College and Hospital, Udaipur.

### NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Bhatia Gunjan,  
1 Ra 6 Gayatri Nagar,  
Hiran Magri Sector-5,  
Udaipur-313002.  
Email: gunjanpath@gmail.com

Date of Submission: 18/06/2014.  
Date of Peer Review: 19/06/2014.  
Date of Acceptance: 26/06/2014.  
Date of Publishing: 03/07/2014.