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“ Despite of best efforts to control and treat tuberculosis, more than 10 million individuals are diagnosed with tuberculosis every year. ”

INTRODUCTION

Tuberculosis remains a major health concern in India, with increasing cases of dissemination beyond the pulmonary system.

Diagnosing tubercular lymphadenitis is challenging, especially in resource-limited settings.

We conducted a prospective observational study to evaluate the clinical characteristics of patients with peripheral tubercular lymphadenitis, including histopathological features and sensitivity of Ziehl-Neelsen (ZN) staining and nucleic acid amplification tests (NAAT) on fine needle aspiration cytology (FNAC). Treatment response was assessed at 1 month, 2 month and the end of the 6-month therapy.

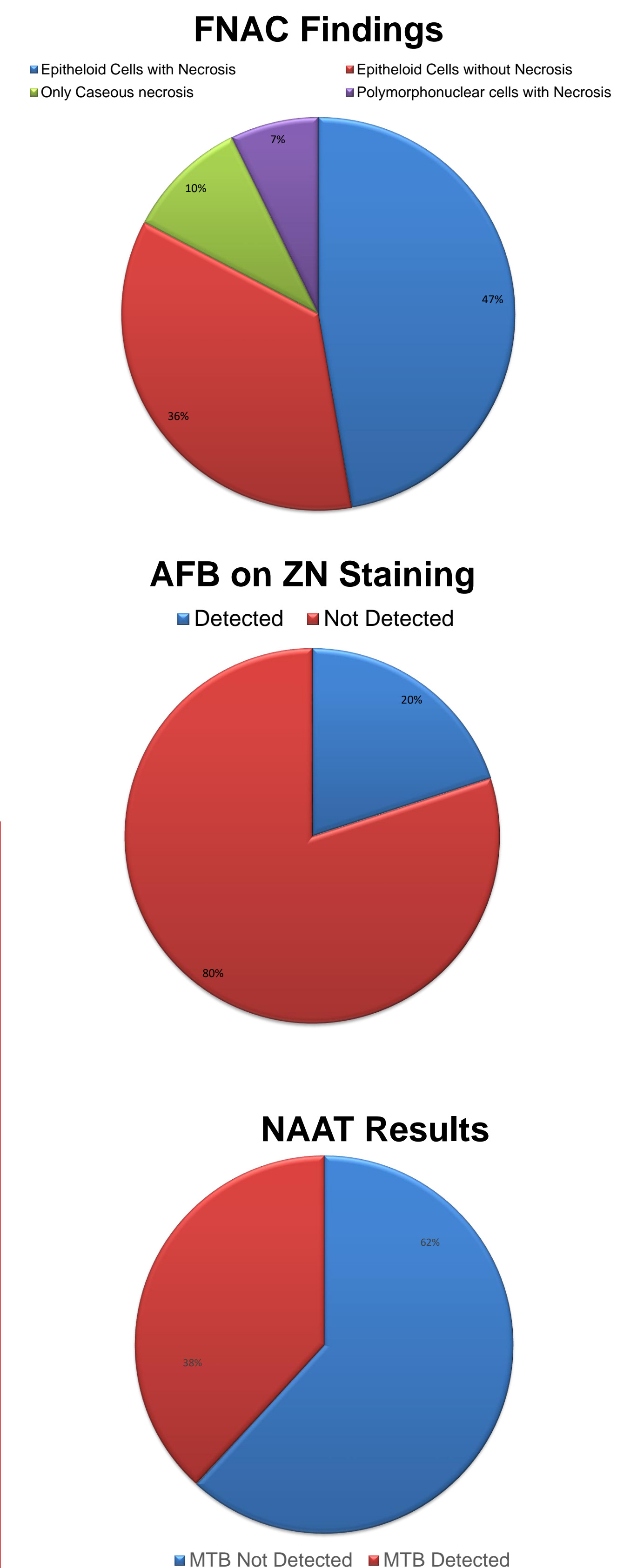
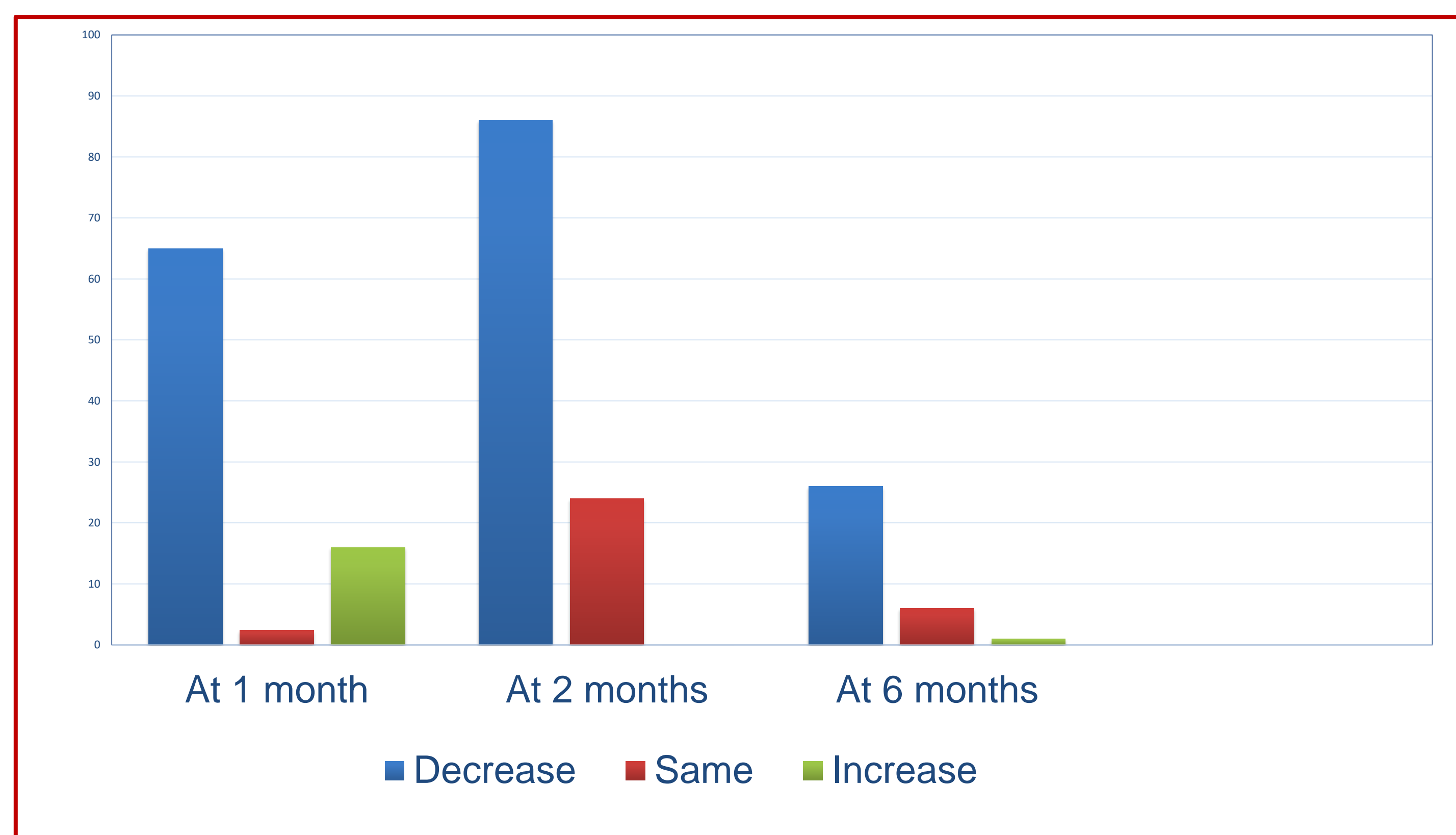
METHODS

This 1 year study involved 110 adult patients with histopathologically confirmed peripheral tubercular lymphadenitis. Patient history and examination recorded and necessary hematological, microbiological, and radiological investigations were conducted. Anti-tubercular treatment (ATT) initiated as per NTEP guidelines and lymph node status was assessed clinically at baseline, 1 month, 2 month and on treatment completion. Data analysed using SPSS-25. Normality of variables assessed using the Kolmogorov-Smirnov test. Quantitative data expressed as mean, median and standard deviation. Qualitative data expressed in percentages, with differences between proportions tested using the chi-square test or Fisher's exact test. A p-value < 0.05 considered statistically significant.

RESULTS

90.9% had cervical nodes with average size 2.78 ± 1.07 cm, 20.91% had abscess and sinus in 11.82%. Chest X-ray and abdominal USG abnormalities were present in 40.9% and 20%, respectively. On FNAC, 47.27% had epithelioid cells with caseous necrosis, ZN staining positive in 20.0%, NAAT in 38.18%. After 1 month of ATT, 97.27% had nodes, reducing to 95.45% after 2 months. 7.27% had paradoxical response at 1 month, none at 2 months. At 6 months, only 30.9% had nodes, with 23.63% showing decreases, 5% unchanged, and 0.9% a new node (p < 0.001).

Characteristic		Observation				P Value
		Baseline	At 1 Month	At 2 months	At 6 Months	
Consistency	Firm, mobile node	110	107	105	34	<0.001
	Matted Consistency	24	25	24	9	<0.001
Clinical profile	Abscess	23	6	2	1	<0.001
	Sinus or Discharge	13	11	4	0	<0.001
	Tenderness	53	19	5	1	<0.001
Size	Decrease in size	-	65	83	26	
	Same size	-	27	22	6	
	Increase in size	-	15	0	1	
Number of nodes	New nodes	-	8	0	1	0.368
	Mean (SD)	1.99 (1.3)	1.98 (1.29)	1.83 (1.22)	0.41 (0.67)	<0.001
	Median (IQR)	1 (1 - 3)	1 (1 - 3)	1 (1 - 2)	0.0 (0.0-1.0)	



CONCLUSION

A significant number of cases (49%) showed dissemination; it is advisable that all patients with peripheral tubercular lymphadenitis undergo chest radiograph and abdominal ultrasound as part of their initial evaluation. FNAC was highly diagnostic, with NAAT proving more sensitive than ZN staining. Combining ZN staining with NAAT on FNAC enhances diagnostic success. Six months of ATT resulted in an overall reduction in lymph node size, abscesses, and sinuses. Paradoxical responses were most common at 1 month of ATT but could occur even after completion. The study provides insights into clinical presentation, diagnostic approaches, and therapeutic response of tubercular lymphadenitis, highlighting importance of multi-modal assessment.

Acknowledgements

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