

ABSTRACT

BACKGROUND:

The diagnosis of extra pulmonary tuberculosis in tissue sections has always been challenging because of the low yield of bacilli in formalin fixed, paraffin embedded tissues.

AIM:

The aim of the present study is to evaluate the diagnostic value of immunohistochemical analysis using rabbit polyclonal mycobacterium tuberculosis antibody and compare the immunohistochemical analysis with Ziehl-Neelsen (ZN) staining in tissue sections of suspected tuberculous lesions.

MATERIALS & METHODS:

The study sample was 50 suspected cases of extra pulmonary tuberculosis. Tissue sections from the cases were subjected to hematoxylin and eosin staining, Ziehl-Neelsen staining and Immunohistochemical staining using polyclonal antibody to Mycobacterium tuberculosis followed by a comparative analysis of the results. Mycobacterium tuberculosis infected lung tissue which were positive for AFB by Ziehl-Neelsen staining was used as positive control.

RESULTS:

12% of cases were positive for acid fast bacilli by Ziehl-Neelsen staining, whereas 82% of cases were positive by immunohistochemical staining. The P value was found to be less than 0.001 by McNemar test which is statistically significant

which shows that immunohistochemistry is better than Ziehl-Neelsen staining for localization of the tubercle bacilli.

CONCLUSION:

Immunohistochemistry can be a reasonable if not better alternative to Ziehl-Neelsen staining or as an adjunct in the diagnosis of extra pulmonary tuberculosis. It is a simple, robust, cheap and sensitive test that can be employed in routine pathology laboratories where results can be available in a day, prompting early diagnosis and treatment.

KEYWORDS:

Extra pulmonary tuberculosis, Mycobacterium tuberculosis, Granulomatous inflammation, Immunohistochemistry, Ziehl-Neelsen staining