

Ziehl Neelsen Stain Sensitivity

in Determining The Etiologic of Granulomatous Inflammation

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Abstract

The main infectious agent of granulomatous inflammation is Mycobacterium tuberculosis. There are a lot of forms and patterns of tuberculosis infection. Clinicians are generally more suspicious of pulmonary infection, while infection of tuberculosis in the other tissue is often overlooked. This observational descriptive study aimed to find out the sensitivity of Ziehl Neelsen (ZN) stain in determining etiologic diagnosis of granulomatous inflammation on histopathological specimens. Study samples were 37 pieces tissue blocks which diagnosed as granulomatous inflammation. The incidence of mycobacteria infection causes granulomatous inflammation in the sample studied was 62.16%. The study found positive Acid Fast Bacilli (AFB) in 23 tissue block. The conclusion of this study was ZN staining technique had 81% sensitivity, 90% specificity, 96% Positive Predictive Value (PPV) and 64% Negative Predictive Value (NPV) to determine the etiologic diagnosis of specific granulomatous inflammation. Special staining techniques can be used to diagnose the etiology of tissue infection that will result in appropriate therapy for patients.

Keywords : Granulomatous inflammation, Specific granuloma, Ziehl-Neelsen Staining