

Comparison of Fluorescent and Ziehl-Neelsen Staining in Fine Needle Aspirates of Tuberculous Lymphadenitis

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Abstract

Background: Tuberculosis remains a global health problem with an enormous burden of disease. Tuberculous lymphadenitis being the most common extra pulmonary manifestation Ziehl-Neelsen stain is the most commonly used method worldwide to detect tuberculous lymph node aspirates, however, Auramine – O Staining is being preferred owing to its high sensitivity, rapidity and ease of screening. **Aims:** The aims of our study was to compare fluorescence staining with Auramine-O with the conventional Ziehl-Neelsen (ZN) stain for detecting tubercle bacilli in tuberculous lymph nodes by Fine Needle Aspiration Cytology (FNAC) and study the efficacy and advantages of using the Auramine-O stain on lymph node aspirates under fluorescent microscopy. **Methods:** We performed a prospective study of sixty-six patients clinically suspected to have tuberculous lymphadenitis from April 2016 to October 2016 at a tertiary care teaching hospital. Clinical and demographic data were collected. FNAC samples were obtained and stained with Papanicolaou and May Grunwald Giemsa stain to assess cytomorphological features. Staining of samples with ZN stain and AO stain was done to identify tubercle bacilli and compare the same. **Results:** Positive staining was noted in 2.7 % cases with AO stain and 16.7 % with ZN stain. 10.6% cases showed lymphocytosis. Overall sensitivity, specificity and PPV of IF in comparison to ZN stain was 45.45 %, 81.82%, 33.33% respectively. Overall sensitivity, specificity and PPV of ZN in comparison to IF staining was 33.33%, 88.8%, 45.45%, respectively. **Conclusions:** IF staining is a more effective, easy and rapid alternative to ZN staining is detecting TB bacilli through FNAC, especially in paucibacillary cases.