ABSTRACT

Tuberculosis (TB), which is caused by the bacillus Mycobacterium tuberculosis, is one of the top 10 infectious diseases that cause death in the world. Bacteriological examinations used to establish the diagnosis of TB are microscopic examination, TB Molecular Rapid Test and culture examination. However, culture examination cannot give fast results because the growth of MTB bacteria is slow, thus preventing early detection of TB cases.

This study aims to analyze the diagnostic test of Mycobacterium tuberculosis using the GeneXpert and Ziehl Neelsen methods. This research is descriptive analytic using a cross sectional design. The sample studied was 102 samples taken by the total sampling method during January 2022 at the Sidotopo Public Health Center Surabaya. The results of the identification of suspected TB samples using the GeneXpert and Ziehl Neelsen methods were in line with 96 samples (94.12%), while the difference in results from the two was 6 samples (5.88%). The results of the GeneXpert method sensitivity test are 75%, and Ziehl Neelsen are 60%, meaning that GeneXpert's ability to detect positive results in sick people is greater. While the specificity of the GeneXpert method is 95.7%, and Ziehl Neelsen is 97.8%, meaning that Ziehl Neelsen's ability to classify people who are not sick as people who really do not have the disease is slightly better. So it can be concluded that the GeneXpert method is more recommended in establishing a TB diagnosis because it has a higher sensitivity than the Ziehl Neelsen method, and can provide results much faster than culture examination.

Keywords: *Mycobacterium tuberculosis, Genexpert, Ziehl Neelsen*