



PROCEEDING BOOK

Seminar on Infectious Diseases

*"Management, Prevention and Control in Emerging and
Re-emerging Infectious Diseases"*

In conjunction with A-Z Vaccine Dengue

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SEMINAR ON INFECTIOUS DISEASES

"MANAGEMENT, PREVENTION AND CONTROL OF EMERGING
AND RE-EMERGING INFECTIOUS DISEASES"

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Positivity Rate of Detection *Mycobacterium tuberculosis* in Extrapulmonary Tuberculosis in Clinical Microbiology Laboratory Sanglah General Hospital Period 2013-2015

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Extrapulmonary tuberculosis (EPTb) is a significant problem in tuberculosis (Tb) worldwide especially in developing country. Based on World Health Organization (WHO) data 2013 that 9,3% from 8,6 million people who affected TB are EPTb. Culture is a gold standard in diagnosis EPTb, but its low positivity rate make it is not ideal test for EPTb. On this study we conducted a retrospective study on TB's data in Clinical Laboratory Sanglah General Hospital. We collected the last three years 2013-2015 *Mycobacterium tuberculosis* (Mtb) detection data by using 3 methods such as Ziehl-Neelsen (ZN), culture and polymerase chain reaction (PCR). There were 18 positive culture yielded from various specimens like pus, tissue, pleural fluid, gastric fluid, liquorcerebrospinalis (LCS) and pericardium fluid. It accounts 5,5% and 2,4% from all specimens and extrapulmonary specimens, respectively. The most frequent extrapulmonary specimen was LCS and its positivity rate 1,3%, 3,0% and 5,7% among all specimens, extrapulmonary specimens and all LCS specimens, respectively. Positivity rate Mtb by ZN is critically low as a detection method in EPTb. There were only 3 specimens from 18 culture positive showing ZN positive. It has only 0,4% and 0,9% positivity rate among all specimens and extrapulmonary specimens, respectively. By using PCR method, there were 158 specimens positive and its positivity were slight difference among all specimens (13,9%) and extrapulmonary specimens (14,5%). The two most positive results among extrapulmonary specimens by PCR method were LCS and pleural fluid. The various positivity rate of detection Mtb among extrapulmonary specimens on this study depends on the method used. Since we know PCR is not a gold standard for TB diagnostic, but its positivity rate among other methods is quite compromise as a diagnostic tool in EPTb and helps clinician for judging the initial therapy.

Keywords: *extrapulmonary tuberculosis, culture, Ziehl-Neelsen, Polymerase Chain Reaction*