

ABSTRACT**Comparison of Results Culture Lysis Buffy Coat and Unlysis Buffy Coat with Blood Cultures Suspect in Patients with Fever**

By : Leka Lutpiatina

Blood culture is one of the most sensitive procedure to detect bacteria in the blood. Diagnosis of bacteremia using blood cultures has been considered as the gold standard for many years (Shafazand & Weinacker 2002). Buffy coat culture in bacteremia patients had similar results with blood culture (Valle Jr., DL, et al., 2010). Salmonella culture of buffy coat with an alternative method of direct plating and more rapid diagnosis (Wain et al., 1998). Lyse phagocytic cells in the buffy coat can increase the number of bacteria identified (Wain et al., 1998). Phagocytic cells can undergo autolysis after blood sampling and inoculated in growth medium. Autolysis is the process of destruction of the cell through the cell enzyme itself (Bardale & Dixit, 2005). Gram stain of the buffy coat can be used for early detection of bacteremia patients. (Richmond et al. 2002). This research aims to study the differences in the proportion of positive results of buffy coat lysis culture, unlysis buffy coat culture and blood cultures using biphasic media in patients with fever. Type of research is an observational analytic with cross sectional study design. Blood sampling performed in 27 patients suspected fever in Ratu Zalecha General Hospital Martapura by purposive sampling. Blood samples were cultured with three methods i.e: buffy coat lysis culture, unlysis buffy coat culture and blood cultures using biphasic media. Buffy coat Gram staining was also performed to see the presence of bacteria in the preparation. Data were analyzed using the Kolmogorov-Smirnov Z test of difference for culture results. The results of 27 samples were found to Gram-negative bacteria, other than *Salmonella* namely *E. coli*, *Serratia* sp, *Pseudomonas* sp, *Klebsiella* sp. Statistical analysis showed that there was no difference in the results of buffy coat lysis culture, unlysis buffy coat culture and blood cultures using biphasic media (P = 0.392). Suggested similar studies need to be conducted in a population of patients with suspected typhoid fever and sample inclusion criteria were more specific in order to find the results of the growth of *Salmonella* bacteria.

Key Word : Blood Culture, Buffy Coat, Suspect Fever