

KINETICS OF CD69 EXPRESSION ON NATURAL KILLER CELLS DURING ACUTE PHASE OF DENGUE INFECTION.

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Background. Dengue infection is major annual public health problem in Indonesia. NK cells have a role in cellular immunity to viral infection, however only a few studies of NK cells and were conducted in vivo, especially in Indonesia.

Objective. To explore the kinetics of CD 69 expression on NK cells during the acute phase of dengue infection.

Methods. Observational cohort study in Dr.Sardjito Hospital was conducted. Clinical data and laboratory data was collected to measure the the number of activated NK cells (CD69) using flowcytometry. The percentage of CD69 then calculated using non-parametric test (kruskal-wallis test) and student t-test. The fluorescence intensity of CD69 was also analyzed.

Results. The mean of activated NK cells (CD69) percentage are higher during the early days of acute phase (day 2- day3), and continuously declined after that until the seventh day but statistically they are insignificant. Fluorescence intensity of CD69 showed its peak during the fifth day of fever.

Conclusion. CD69 expression on activated NK cells were increased during the early days (day 2-day 3) of acute fever but decreased after that (day 4-day 7). The highest intensity of CD69 expression was on the fifth day of fever.

Keywords. Dengue infection, kinetics, NK cell, CD69, cellular immune response, acute phase, adults.