

ABSTRACT**CORRELATION BETWEEN ADENOSINE DEAMINASE ACTIVITY IN
PLEURAL FLUID AND SERUM OF PATIENTS WITH PLEURAL
EFFUSION****PANDE PUTU AYU PATRIA DEWI**

Introduction. Pleural effusion is an abnormal accumulation of fluid in the pleural space resulting from increased production of fluid or decrease resorption of fluid in the pleural space. Pleural effusion can be caused by infectious diseases, malignancies, collagen disease, gastrointestinal disease, heart disease, and other causes such as medication, nephrotic syndrome, and radiation. Adenosine deaminase (ADA) is an enzyme involved in the catabolism of purines which catalysis the change of adenosine into inosine and deoxyadenosine into deoxyinosine. This enzyme can be measured in pleural fluid, serum and other body fluids such as cerebrospinal and ascites fluid. The aim of this study was to analyze the correlation between adenosine deaminase activity in pleural fluid and serum in patients with pleural effusion.

Methods. Subjects were 46 patients with various causes of pleural effusion. This research was an analytical observational study with a cross sectional design. Examination of ADA activity was performed in pleural fluid and serum. ADA activity was examined using enzymatic methods, using Diazyme reagent by TMS 24i Premium.

Results. Mean \pm SD ADA activity for all pleural effusion sample in serum was 13.037 \pm 8.365 U//L and pleural fluid 30.843 \pm 28.860 U//L. No correlation between ADA activity in serum and pleural fluid ($r=0.173, p=0.252$) in all sample. No correlation between ADA activity in serum and pleural fluids was found in malignancies ($r=0.109, p=0.630$), tuberculosis ($r=0.366, p=0.123$), systemic diseases ($r=0.466, p=0.429$), and non tuberculosis group ($r=0.126, p=0.532$).

Conclusion. There was an increase of ADA activity in pleural fluid. There was no significant correlation between pleural fluid ADA activity and serum.

Keywords. Adenosine deaminase, pleural fluid, serum, correlation