

ABSTRACT

Objective : The aim of this study was to determine semen Selenium level in smoker and non smoker's men, and to determine correlation between Selenium level and sperm quality. This research has been done in Clinic of Andrology RSUD Dr. Soetomo & Labkesda – Surabaya. Semen Selenium level was measured with atomic absorption spectrophotometry (AAS) and the variables of sperm quality were sperm concentration, total sperm, sperm motility and sperm morphology.

Design : An analysis observational cross sectional, laboratories with ex-post facto design with purposive sampling was conducted. For analysis of data used t- test and Pearson correlation.

Patients : 69 men were enrolled, 36 of them smoked at least 3 cigarettes per day for at least 5 years and 33 were not smoker.

Results : Selenium level in smoker group was 158 ± 77.35 mg/l, and non smoker group was 195.32 ± 73.33 mg/l. In smoker group coefficient of Pearson correlation between semen Selenium level with sperm concentration was -0.339 ($p = 0.043$), between semen Selenium level with sperm motility was -0.149 ($p = 0.387$) and between semen Selenium level with sperm morphology was -0.235 ($p = 0.188$).

Conclusions : Semen Selenium level in smoker group was lower than non smoker group ($p < 0,05$). There was a significant negative correlation between semen Selenium level with sperm concentration ($p < 0,05$), but were no significant correlation between semen Selenium level with sperm motility and morphology ($p > 0,05$).

Key Words : *Selenium level, smoker, cigarettes, semen, sperm, sperm concentration, sperm motility, sperm morphology, Pearson's correlation .*