SUMMARY

The Effect Of Mercury Levels Against Cystatin C Serum Levels And Kidney Disorders Complaints In The Blood Of Traditional Gold Processing In Two Vilage Kokap District, Kulon Progo Yogyakarta

Mercury is the chemical substance of materials for processing gold which to kidney disorders. Chronic exposure of mercury effects increasing level serum Cystatin C. Measurements of mercury in blood was average level 63,65 µg/l in exposed group while in unexposed group average level 25,56 µg/l that exceeded to the threshold limit value. This aim of study was to analyze the effect level of mercury in blood against serum cystatin c level and kidney disorders complaints of traditional gold processing in two villages Kokap Kulon Progo Yogyakarta. The benefit of this study could give information about levels of mercury in blood, serum Cystatin C level and kidney disorders complaints at two villages Kokap Kulon Progo Yogyakarta.

The design of this study was observational analytic with cross sectional. The study sites of traditional gold processing in two villages Kokap Kulon Progo Yogyakarta and non-processing society in the village of Sumberadi Mlati Sleman Yogyakarta. The research was conducted from February to Juli 2015. The population of this study was 2 population that were the workers of traditional gold processing and society in the village of Sumberadi Mlati Sleman Yogyakarta with some criteria that worked at male, worket at least 5 years, not getting sickness kidney disorders and willing to participate in this study. Sample size was 22 persons that was taken by simple random sampling, 11 persons from each workers of traditional gold processing and society in the village of Sleman.

Mercury analyzer was used to obtain level mercury in blood and PETIA method was used to obtain serum Cystatin C level. Health complaints data collection was gained by interview using a questionnaire, likewise to obtain the age data, works period, using mask habits, and nutritional status. Data analysis used linear regres
The research result showed 66,67% of traditional gold processing 39-47 years while 75% of society in the village of Sleman was 48-56 years old. The BMI of gold processor was 45,45 % normal, while 54,55 % of society in the village of Sleman it was a normal BMI. Work period of administration worker was about ≤ 9 years and that workers at gold processor that use mask but incomplete during work was 100 %.

The average level of mercury in blood was 63,65 µg/l in gold processor while society village of Sleman average level of of mercury in blood 25,56 µg/l. The average level of serum Cystatin C were 1,07 mg/L of gold processor while at society village of Sleman 1,10 mg/L. And the most health complaints of worker kidney disorders. The analysis result showed that effect level mercury in blood effected against serum Cystatin C exposure group and not exposed, but health complaints was effected kidney disorders of level mercury in blood.

It is concluded that effect of level mercury in blood against serum Cystatin C of gold processor, kidney disorders complaints of traditional gold processor. Otherwise, there is effect of level mercury in blood to health complaints. It is suggested that reduce the exposure of mercury into the body by regulating the rotation of work , shift work and the use of personal protective equipment complete, expected that further research on the effect levels of mercury in the blood to levels of cystatin C in serum farmer pesticide users that contain mercury because in this study contained mercury levels in the blood group is not exposed to the majority of subsistence farmers.