ABSTRACT

Home industry of batteries is the manufacture of tin. Tin is made from making battery cells. The cell containing the metal lead (Pb). Lead (Pb) causes 200,000-500,000 cases of hypertension and causes 400 deaths each year. The objectives of the study were to analyze the levels of Lead (Pb) in blood and hypertension at home industry workers of batteries.

This was an observational research and using cross-sectional approach. Data obtained from interviews, questionnaires, and observations. Measurement of blood lead using *Atomic Absorption Spectrophotometer* and measurement of blood pressure using a tensimeter then the data were analyzed descriptively. Samples were selected from population by using a total population of 10 workers home industry of baterries.

The Age of workers most is less than 30 years was 50%. Workers did not wash their hands with soap was 30%, workers who have washing their hands with petrol was 20% and workers did not change the clothes after they work was 40%. Workers who have smoking was 30%. Workers did not wear boots Personal Protective Equipment was 30%, workers did not wear a mask while riding a motorcycle was 40%, and workers who have consuming a lot of salt was 20%. Lead levels in the blood of workers was under the standards by WHO <40 μg/dL, the lowest levels of lead in the blood of 7.286 μg/dL and the highest levels of lead in the blood of 12,259 μg/dL. Blood pressure, workers who have hypertension was 40%.

Hypertension can not be interpreted from levels of lead (Pb) in the blood, because of the results obtained by other factors that could affect hypertension as age, sex, smoking, and consuming salt intake. However, the higher levels of lead in the blood was hypertension.

Keywords : levels of lead (Pb) in the blood, hypertension