

Thesis Title	A Study on Specificity of Live Blood Analysis for Heavy Metal Measurement Compare with Urine Heavy Metal
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ABSTRACT

Background: In human life has many kind of heavy metals are involve such as lead, mercury, cadmium, arsenic .They use in industrial factory such as battery factory, in agriculture use in insecticide and fertilize or use in medical such as dental tools. Human always have risk of heavy metals exposure pass through the body in different way such as inhalation or oral via food consumption, drinking water which has contaminated with heavy metal toxicity. In every year has a reported show in Thailand and in the world can be detect heavy metal toxicity in the environment especially near the industry which drain waste product to the river or soil. Therefore it has to early detect about heavy metal toxicity which a key factor in successful treatment. The screening test is rapidly technique for early detection of disease. Live blood analysis is screening test for many disease such as nutritional deficiencies, immune System, heavy metal. The results present crystal in live blood analysis which can indicate a patient has abnormal symptoms. After that patients come to check in lab testing such as urine testing or hair testing and continue to treatment. In this research use live blood analysis technique which has screening test for heavy metals compare with urine heavy metal.

Objective: A study on specificity of live blood analysis for heavy metal measurement compare with urine heavy metal.

Method: The study design was a retrospective study from secondary data. Collect secondary data from 99 Patients in TRIA Integrative Wellness at Piyavate hospital, male and female, who have to receive assessment for live blood analysis and urine heavy metal. Sixty-two patients who have crystals in live blood analysis and thirty-three patients who have no crystals in live blood analysis. The assessment of results based on clinical features by Physicians and can analyze the collection form result in live blood analysis and the presence of whole urine heavy metal by Statistics analysis.

Result: The statistical analysis of the data for compare between live blood analysis and urine heavy metal, the results shows a group with crystal of five heavy metals such as lead, cadmium, manganese, nickel, arsenic (mean 10.14 ± 16.57 , 0.56 ± 0.87 , 12.80 ± 32.79 , 1.73 ± 2.36 , 86.28 ± 133.24 , respectively) has significantly high level of heavy metals in urine than those without crystal (mean 5.42 ± 6.89 , 0.26 ± 0.25 , 1.38 ± 0.79 , 0.63 ± 0.87 , 23.28 ± 16.87 , respectively), p value $P < 0.001$, $P = 0.003$, $P < 0.001$, $P < 0.001$, $P < 0.001$, respectively. Second, after the statistical analysis of the data for correlation between crystal in live blood and higher level of heavy metals in urine shows four heavy metals have statistically significant difference such as cadmium, manganese, nickel, arsenic ($p = 0.039$, $p = 0.037$, $p = 0.008$, $p = 0.005$, respectively). Furthermore the statistical analysis of the age and sex has not statistically significant difference for correlation between live blood analysis and urine heavy metal.

Conclusion: The result from live blood analysis that appears to have crystal could be a good indication that the following five heavy metals are lead, cadmium, manganese, nickel, manganese will be found in urine.

Keywords: Live Blood Analysis/Heavy Metal/Urine Heavy Metal