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Letter to the Editor

# The relationship between blood lactate, carboxy-hemoglobin and clinical status in CO poisoning

*Dear Editor*,

We have read the "The relationship between blood lactate, carboxy-hemoglobin and clinical status in CO poisoning" titled paper with great interest[1]. We believe that such a rare and interesting study consists valuable information. By this letter, we want to present our additions to the valuable authors and readers.

As mentioned in the study, detection of blood lactate level is useful in diagnose and management of many diseases in emergency departments. According to several papers, difference up to 0.08 mmol/L in blood lactate level between arterial and venous samples can be seen and this condition does not regards any laboratory and clinical importance[2,3]. It is known that normal blood lactate levels is usually below the 2.1 mmol/L[4]. Moreover, it is reported that there is no difference in COHb levels between arterial and venous blood gas samples and arterial blood sampling is not essential for measurement of COHb[5]. Although it does not effects the results, it didn't mentioned in the study which blood sample used in detection of blood lactate levels. Secondly, authors did not mentioned the normal lactate levels of the laboratory that they have used in the methods section of the study. Authors should mention in the study how did they decided the high blood lactate levels. In the method section of the study there is a phrase as "…peripheral blood COHb to be > 5 g/dl..." We think that "g/dl" unit is not a proper use for COHb. Expression of Carboxyhemoglobin generally done as percent hemoglobin.

Dogan et al assessed the serum lactate levels to predict the severity of CO poisoning. It can be seen that results of both study is comparable with each other[1,4]. Dogan et al reported that blood lactate levels are not significantly correlated with chest pain ($p = 0.223$) and ischemic ECG findings ($p = 0.192$)[4]. But in this study, blood lactate levels are correlated with CK-MB and Troponin-I[1]. Another important key point in both study is blood lactate levels may be an important indicator for the HBO treatment. Even Dogan et al[4] reported that 1.85 mmol/l blood lactate level is an important indicator for HBO treatment in CO poisoning (sensitivity of 70.8% and a specificity of 78.0%) and HBO treatment is required for such cases.

As a conclusion, we want to thank to the authors and your journal who allows us to read such a paper containing valuable information and we are happy to make the contributions above.

This study would contribute to the management of CO poisoning cases in emergency departments.

## Conflict of Interest

The Authors declare that they have no conflict of interests.

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