ACTA SCIENTIFIC MICROBIOLOGY (ISSN: 2581-3226)

Volume 2 Issue 8 August 2019

Research Article

What is the Relation of Normal Blood Oxygen level with Tooth Decay?

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Received: May 24, 2019; **Published:** July 03, 2019

DOI: 10.31080/ASMI.2019.02.0291

Abstract

Blood oxygen level in the body can be determined by an instrument known as pulse oximeter. In blood oxygen level normal arterial oxygen level ranges from 75 to 100mm of mercury. If the values are lower than the 60mm of mercury then this usually indicates the need of the oxygen in the body. There are two methods of measuring the blood oxygen level in the body. Tooth decay is the destruction of the teeth. In this the upper protective layer of the teeth is destroyed by the action of the bacteria. Objective of present study was to co relate the blood oxygen level to the tooth decay [1]. A total of 200 students from Bahauddin Zakariya University of Multan, Pakistan participated in this study. We designed a project in this we asked from different subjects about their peripheral oxygen level and then evaluate the effect of peripheral oxygen level with tooth decay in different subjects.

Keywords: Pulse Oximeter; Dental Caries; Bacteria

Introduction

In blood oxygen level normal arterial oxygen level ranges from 75 to 100mm of mercury. If the values are lower than the 60 then this usually indicates the need of the oxygen. Pulse rate is usually checked by the oximeter. Normal pulse rate is usually ranges from the 95 to 100%. If Values are under of 90% then they are considered as low pulse rate. In this it sends the infrared rays to the capillaries in the finger and then it detects the how much light is reflected off the gases. And then reading indicates that how much blood is saturated. There are two methods of measuring the blood oxygen level in the body. One is the ABG method and the other method is the COPD method. In the ABG method, this test is used for the measurement of oxygen level in the body. And the second method is also used for the same purpose [2].

Tooth decay is the destruction of the teeth. In this the upper protective layer of the teeth is destroyed by the action of the bacteria. The destruction of the teeth is due to the overuse of the sugary material. This is common in all types of individual but especially in children. In this case a hole is formed between the teeth and this hole is known as cavity. In this Objective of present study was to co relate the blood oxygen level to the tooth decay.

Material and Method

A total of 200 students from Bahauddin Zakariya University of Multan, Pakistan participated in this study.

Peripheral saturation of oxygen measurement

Peripheral saturation of oxygen in the blood can be determined by an instrument known as pulse oximeter. The formula for the peripheral saturation of oxygen measurement is,

$$\mathbf{SpO_2 = HbO_2 / HbO_2 + Hb}$$

HbO_2= It is oxygenated heamoglobin
Hb = It indicates that Deoxygenated heamoglobin

Project designing

We designed a project in this we asked from different subjects about their peripheral oxygen level and then evaluate the effect of peripheral oxygen level with tooth decay in different subjects.

Statistical analysis

Statistical analysis was applied by using MS- Software to calculate the results. In this t-Test applied to calculate the result. And the $p<0.05$ is considered as significant value and it is represented by *known as stearic.

Result and Discussion

In this study t-test was applied and the results are calculated by this test. These results showed that there is a great effect of the normal blood oxygen level upon the tooth decay. The results were obtained were significant. The p-value for the females were obtained were 0.04. The p-values for the males were 0.283. While results that were obtained for the both males and females were

0.358. So these values were considered as significant values. The results for the males and females are given in the table and in the graphical form [3-8].

Gender	Have tooth decay	Have no tooth decay	P-value
Males	95.315 ± 6.529	97.075 ± 3.626	0.283
Females	97.076 ± 3.444	95.191 ± 12.2368*	0.04
Combined	96.5 ± 4,695	95.717 ± 6.86	0.358

Table 1: Relation of normal blood oxygen (Mean ± SD) with tooth decay.

*P<0.05

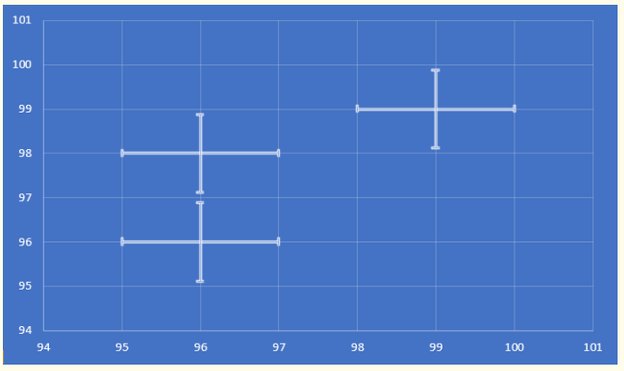

Figure 1: Relation of tooth decay with normal blood oxygen level in males.

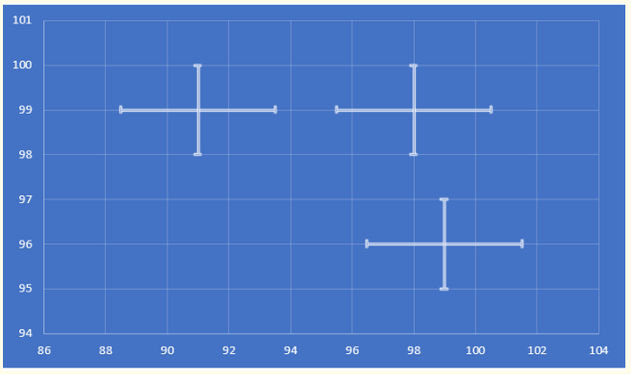

Figure 2: Relation of tooth decay with normal oxygen level in females.

Conclusion

Results are significant because the values are P<0.05. So it indicates that there is relation between the normal blood oxygen level and the tooth decay.

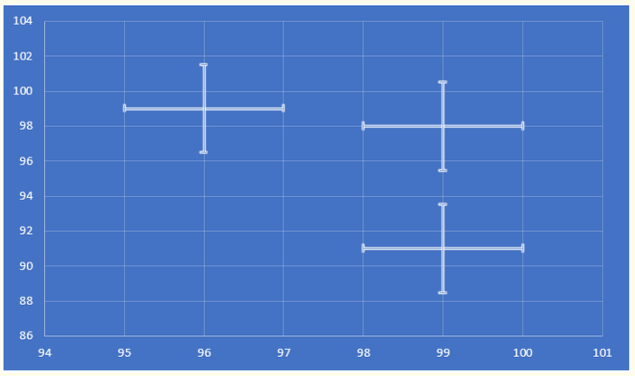

Figure 3: Relation of the tooth decay with normal oxygen level in both.

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