Others Section

Serum Carbohydrate Deficient Transferrin as a Sensitive Marker in Diagnosing Alcohol Abuse: A Case Control Study

TEENA THOMAS[1], JAYADEVAN SREEDHARAN[2]

Dear Editor,

This letter is in response to the article titled "Serum Carbohydrate deficient transferrin as a sensitive marker in diagnosing alcohol abuse: A case control study" published inJournal of clinical and diagnostic research Journal issue2013;7(2):197-200). The article was helpful to understand the importance of biomarkers in alcohol abuse [1].

With all consideration, we would like point out some aspects regarding the study. The sample size was 25 cases and 25 controls; justification for this sample size is not given. The alcohol biomarkers can be elevated due to factors such as participants with digestive problems, kidney diseases or other immune disorders, not only due to alcohol consumption. Hence, these factors should also have been excluded. As per the Substance Abuse and Mental Health Services Administration (SAMHSA) Advisory [2], there is window period for all alcohol biomarkers and in the methodology cases within the window period were not included.As per the methodology, the groups are age matched, which means the groups are comparable with regard to age. What is the need to do a statistical test for comparable groups?

A case control study is used to find risk factors associated with any diseases. Here the primary aim of the study was to evaluate the usefulness of %CDT with other biological markers implicated in alcohol abuse.It is not clear whether the study has identified the clinical use of %CDT compared to other biological alcohol biomarkers. In the Table1, the mean and standard deviation was given on each biomarker on both groups. With mean and SD can we identify the clinical usefulness of %CDT?In this study all biological markers have varies from normal to abnormal level. The normal and abnormal values for the alcohol biomarkers are given in the Table1.

As per literature, false positive results are more prevalent in identifying alcohol abuse because coffee consumption can also reduce the percent of alcohol biomarkers (ALT/AST) [3]. Also diabetes can elevate the %CDT in the blood [4].Themeasures to overcome false positive is not discussed in the study. From the literature it is evident that alcohol biomarkers are present in the blood for months to years even if the participants were having other diseases or non- alcoholics.

In Table2, the sensitivity and specificity of alcohol biomarkers are given.The method of calculation for sensitivity and specificity is not clear. Result section page 199 second paragraph it is mentioned that only study group is included for sensitivity and specificity test. The query is why the control group was excluded from the calculation of specificity and sensitivity. It is not possible to generalize the result of specificity and sensitivity for cases alone or controls alone. If the control and case groupswere compared for sensitivity and specificity, accurate and reliable results would have been obtained.

REFERENCES

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PARTICULARS OF CONTRIBUTORS:
1. Research Division, Gulf Medical University, Ajman, UAE.
2. Research Division, Gulf Medical University, Ajman, UAE.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Teena Thomas,
Research Division, Gulf Medical University, Ajman, UAE.