

Poster presentation

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Serum selenium levels in pulmonary tuberculosis levels with and without HIV/AIDS

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Background

Selenium is an essential trace element and it plays an important role in immunity.

Aim

The present study is to find out the selenium levels in pulmonary tuberculosis (PTB) patients with and without HIV infection and compare with healthy control and correlate with Body Mass Index (BMI).

Materials and methods

A cross sectional study was carried out to estimate serum Selenium levels in newly detected, untreated active PTB patients with (N = 30) and without HIV (N = 33), attending to Thoracic medicine department of Government Rajaji Hospital, Madurai who satisfied rigid selection criteria. Thirty healthy individuals (family members of the patients) were kept as control. Standard method were adopted to collect early morning fasting blood samples for selenium estimation by AAS (atomic absorption spectrometry) in the Department of Biotechnology, Lady Doak College, Madurai. The study was approved by the Institutional Ethical Committee, and informed consent was obtained from participants.

Results

The range, mean and median of serum Selenium levels in PTB patients with and with HIV coinfection were 16 to

101.7, 66.6, and 69 µg/dl; and 29 to 109, 71.9, and 73 µg/dl respectively. The same in control were 101 to 129, 113.1, and 111.6 µg/dl respectively. The mean (S.D) BMI status of HIV positive PTB, HIV negative PTB and control were 18 (0.4), 18.5 (0.6) and 19.9 (0.6) respectively. The differences among the group were statistically significant.

Conclusion

The present findings suggest that Selenium status of patients with active pulmonary TB is low when compared with healthy control. Low concentration of serum Selenium as well as wasting was noticed significantly in PTB patients with HIV infection than non HIV subjects. Hence, these cases require nutritional supplements containing selenium.