



2nd International Conference on Microbial Pathogenesis & Infectious Diseases

Hematological and biochemical complications in tuberculosis patients

Noor ul Akbar

Kohat University of Science and Technology, Pakistan

Background: In the patients having tuberculosis specially who were suffering from pulmonary tuberculosis having seriously affected the hematopoietic system and so response to therapy and prognosis the changes in the hematological system act as marker for the detection of tuberculosis. The aim of the study was to find out the complications of hematological and biochemical profiles of tuberculosis patients.

Methodology: A total of 103 blood samples were collected from HIV negative GeneXpert positive TB patients of different ages and gender and subjected to biochemical and hematological tests through chemistry analyzer (AU480) and hematological analyzer respectively. Some samples had mutations (c.199G>T/p.E67*, (c.485C>T/P162L), c.805G>T/E269*) in IL-12 Rβ1 gens reported previously.

Results: The hematological complications were observed as Lymphopenia ($<1 \times 10^3/\mu\text{L}$) was 8.74%, Lymphocytosis ($>1 \times 10^3/\mu\text{L}$) was 3.88%, Thrombocytopenia ($<150 \times 10^3/\mu\text{L}$), was 2.91%, Thrombocytosis ($>400 \times 10^3/\mu\text{L}$) was 56.31%, Neutropenia ($<2 \times 10^3/\mu\text{L}$) was 1.94%, Neutrophilia ($>7 \times 10^3/\mu\text{L}$) was 42.72%, Lymphopenia ($<1 \times 10^3/\mu\text{L}$) was 8.74%, Lymphocytosis ($>1 \times 10^3/\mu\text{L}$) was 3.88% observed in the TB patients. Similarly the Platelets count showed also complications and diseases which were Thrombocytopenia ($<150 \times 10^3/\mu\text{L}$), was 2.91%, Thrombocytosis ($>400 \times 10^3/\mu\text{L}$) was 56.31%. The highest ESR value was 38.81% in the range (>45 mm/hours) followed by 35.92% of (31 to 45 mm/hour), 16.5% in 16 to 30 mm/hour while the lowest value was (7.77%) in less than 15 mm per hour. In biochemical tests the Bilirubin Total was 0.46 mg/dL, which was decreased from the normal. While S. Amylase 165 ± 64 (U/L), Lipase 308 ± 242 (IU/L) and LDH 327 (U/L) were highly changed (increased or decreased) from the normal.

Conclusion: It was concluded from the current study that hematological and biochemical abnormalities were found in TB patients. The current study revealed that biochemical and hematological tests are helpful for checking the impact of treatment of TB patients as well as for the severity of the TB diseases which should to be conducted especially in recurrent tuberculosis or multi drug resistant.

Keywords: Tuberculosis; Bilirubin; ESR; Lymphopenia; Thrombocytopenia; Thrombocytosis; Neutrophilia

Biography

Noor ul Akbar is an Assistant Professor in Department of Zoology, Kohat University of Science and Technology, Kohat, Khyber Pakhtunkhwa, Pakistan. His research interest includes the study of Tuberculosis, Bilirubin, Lymphopenia, Thrombocytopenia, Thrombocytosis and Neutrophilia.

noorpak_2005@yahoo.com

Received: November 16, 2021 | Accepted: November 26, 2021 | Published: February 19, 2022