TO STUDY THE INFLAMMATORY MARKERS IN ACTIVE PULMONARY TUBERCULOSIS, IT’S CORRELATION WTH DISEASE SEVERITY AND IT’S RESPONSE TO ANTI TUBERCULAR TREATMENT

BACKGROUND: tuberculosis remains the single largest infectious disease carrying high mortality in humans. The protective and pathologic response to tuberculosis to mycobacterium tuberculosis is complex and multifaceted involving many components of immune system with excessive production of cytokines. These cytokines sets an acute phase reaction that brings alteration in the hemotological indices – neutrophil lymphocyte ratio (NLR), red cell distribution width (RDW), erythrocyte sedimentation rate (ESR), and c-reactive protein (CRP) etc whose plasma levels directly reflect the intensity of pathological process and their levels decrease as a response to treatment.

AIMS&OBJECTIVES:

To correlate the mean levels of inflammatory markers (ESR, CRP, RD, NLR) with the disease severity & to assess their level in response to anti tuberculous treatment.

METHODS:

101 new sputum positive pulmonary tuberculosis patients without comorbidities are enrolled in the study. Those patients are classified into mild, moderate and severe according to chest xray. Serum inflammatory markers (esr, crp, nlr, rdw) are measured before and 2 months after anti tuberculous treatment. mean level of the markers are correlated with disease severity as assessed by chest xray. The change in the levels of the markers before and 2 months after treatment assessed.

RESULTS:

Sample comprised of 101 people. ( M=75, F=26). Mean values of the markers before and at end of 2 months are CRP (50.78 VS 19.54), RDW (51.35 VS 30.40), NLR (5.58 VS 3.60), RDW (14.95 VS 13.74), with p values <.001. When the markers level in patient with mild and moderate TB compared with severe TB it is statistically significant p value <0.05.

CONCLUSION:

Thus inflammatory markers are indespensible tools in assessing disease severity, prognosis and monitoring treatment especially in patients in whom biological specimens (esp. extra pulmonary tb, special populations) may not be available monitoring.
Key words:
Pulmonary tuberculosis, neutrophil lymphocyte ratio, C Reactive protein, ESR, chest X ray, sputum AFB