

ABSTRACT

BACKGROUND

Autoimmune diseases are the leading causes of morbidity and mortality. The autoimmune disease results from inappropriate response of immune system to self antigens. Aetiology of autoimmune disease remains largely unknown but candidate etiological factors include genetic abnormalities and infections. Tuberculosis is known to be associated with many auto immune disorders. Populations with exposure to tuberculosis have higher incidence of autoimmune disorders whereas population without any exposure have low incidence.

AIM & OBJECTIVES

To study the incidence of autoimmunity in Pulmonary and extra pulmonary Tuberculosis.

MATERIALS & METHODS

A prospective study was conducted comprising 100 Tuberculosis patients who attended Thoracic Medicine department or Internal medicine department based on inclusion and exclusion criteria. This study was done over a period of six months. Sputum / tissue/ fluid gene expert analysis was done for the diagnosis. Immunological testing for ANA (Antinuclear Antibody) by ELISA method was done for all the patients. Those who were found to be ANA positive underwent ANA profiling for detecting specific autoantibody.

RESULTS

Male patients were 69 % of the study population and female patients constituted 31 % of study population. Among males, Pulmonary TB was diagnosed in 47 patients and extra pulmonary TB was diagnosed in 22 patients. Among females, Pulmonary TB was diagnosed in 20 patients and extra pulmonary TB in 11 patients. . Of the 100 patients, 15 patients were ANA positive; 10 patients with pulmonary TB and 5 patients with extra pulmonary TB. The most common pattern identified was speckled pattern (13 patients). Nucleolar pattern was seen in 1 patient and pseudo centromere pattern was seen in 1 patient. Significant association was found between ANA report and sputum AFB. ANA profiling done for the 15 ANA positive cases showed significant specific auto antibodies in 2 cases. 1 patient had Anti-ds DNA which is a specific antibody for SLE and another patient had SS-A/ Ro which is a specific antibody for Sjogren's syndrome. Other auto antibodies detected in insignificant values were Scl 70, nucleosomes, Anti-SmD and Mi-2.

CONCLUSION

Tuberculosis and autoimmune diseases have a complex relationship with one another. There is higher risk of tuberculosis in patients with autoimmune diseases which may be related to the disease process; Immunosuppression by the drugs used for treatment of autoimmune diseases. In turn tuberculosis can precipitate autoimmune diseases. The symptoms of tuberculosis overlaps with the symptoms of connective tissue disorders causing a delay in

diagnosis. Auto antibodies can develop in tuberculosis even in the absence of the symptoms and specific auto antibodies of connective tissue disorders.