

Case Report


Bronchiectasis and Hashimoto's Thyroiditis (Autoimmune Thyroiditis) with Multi nodular toxic goiter - A case report

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Abstract

A 42 years old female, presented with multi-nodular goitre with Hashimoto's Thyroiditis (Autoimmune Thyroiditis), hyperthyroidism and Bronchiectasis. The association of Bronchiectasis with Hashimoto's Thyroiditis (Autoimmune Thyroiditis) is well known. But so far there were no case reports of Bronchiectasis co-existing with Hashimoto's Thyroiditis (Autoimmune Thyroiditis) and hyperthyroidism with multi-nodular goitre. This case was presented with multi-nodular goitre, hyperthyroidism with Bronchiectasis. Thyroid profile revealed hyperthyroidism with TPO Ab – 80 IU/ml, Tg Ab – 60 IU/ml, CT chest revealed Bronchiectasis.

Key words

Bronchiectasis, Hashimoto's Thyroiditis (Autoimmune Thyroiditis), Hyperthyroidism, Multi-nodular goitre.

Introduction

Most of the studies reviewed, revealed a well-established association between Bronchiectasis and autoimmune conditions like Rheumatoid arthritis [1], Sjogren's syndrome [2], Systemic

Lupus Erythematosus (SLE) [3], Systemic Sclerosis [4], Ankylosing spondylitis [5], Mixed Connective Tissue Disorder (MCTD) [6], Polymyositis and Dermatomyositis [7, 8], Common Variable Immune Deficiency (CVID)

[9], Hashimoto's Thyroiditis (Autoimmune Thyroiditis) [10, 11]. Almost all the studies demonstrated an association between Bronchiectasis [12] and hypothyroidism. Though Hashimoto's Thyroiditis (Autoimmune Thyroiditis) can present with hyperthyroid state, but there are no case reports of Hashimoto's Thyroiditis (Autoimmune Thyroiditis) and hyperthyroidism with multi-nodular goitre co-existing with bronchiectasis. Here, we have presented a case report demonstrating an association between Hashimoto's Thyroiditis (Autoimmune Thyroiditis) and hyperthyroidism with multi-nodular goitre co-existing with Bronchiectasis.

Case report

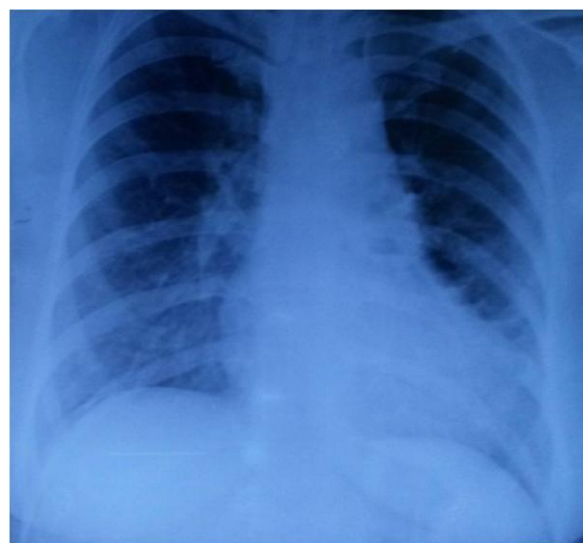
42 years old female presented with complaints of breathlessness without exertion. She also complained of productive cough with non-foul smelling purulent sputum. She had no similar complaints in the past and her past medical history was unremarkable.

On examination, there was exophthalmos of both the eyes, and tremors at outstretched hands. Multi-nodular goitre was present in the neck. Her temperature was normal, Pulse Rate was 112/min, Blood Pressure was 110/70 mmHg, Respiratory Rate was 18/min. Examination of cardiovascular system (CVS) was normal. Respiratory system examination revealed coarse crepitations in lower lobe of the right lung. Central nervous system (CNS) examination revealed tremors at outstretched hands

On Investigation, complete urine examination revealed albumin - nil, sugar - nil, complete blood picture showed hemoglobin - 11.7 gm%, RBC - 4.9 million/mm³, WBC: TLC - 6000/mm³, DC - Neutrophils -80%, Lymphocytes - 15%, Eosinophils - 2%, Basophils - 0%, Monocytes - 3%, Platelets - 2.6 lakhs/mm³. ESR - 35mm 1st hour, RBS - 113 mg/dl, Blood Urea - 18 mg/dl, Sr. Creatinine - 0.8 mg/dl, sputum Microscopy revealed > 25 Pus cells, few epithelial cells. Sputum for AFB was

negative. Sputum for C/S revealed growth of streptococci pneumoniae, sensitive to Amikacin, Ciprofloxacin, Gentamycin, Imipenem, Meropenem. Chest X-ray-PA view showed cystic bronchiectatic changes in left parahilar region (**Figure - 1**). CT scan of the chest revealed cystic bronchiectatic changes with mucus plugs in lingular lobe and apical and anterior basal segments of lower lobe on the left side (**Figure - 2**), ECG showed sinus tachycardia. USG abdomen revealed normal study. USG of Thyroid revealed - right lobe 3.4X2.0X2.0 cm, Left lobe 3.1X1.9X2.1 cm, Isthmus 3.9 cm, with multiple nodules. Thyroid Profile revealed - T₄ - 671 p mol/lt, T₃ - >30 p mol/lt, TSH - 0.01 m IU/lt, TPO Ab - 80 IU/ml, Tg Ab - 60 IU/ml. FNAC of thyroid revealed autoimmune thyroiditis.

Figure - 1: X-ray chest PA view shows cystic bronchiectatic changes in left parahilar region.



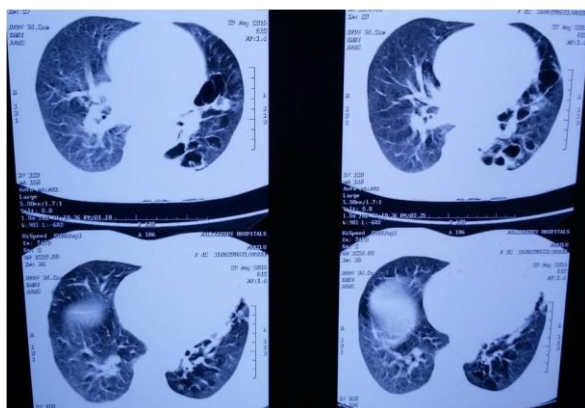
Based on history, clinical examination and an investigation, patient was diagnosed as a case of Bronchiectasis and Hashimoto's Thyroiditis (Autoimmune Thyroiditis) with multi-nodular toxic goitre.

Discussion

There is an established association between Bronchiectasis and autoimmune diseases. The common variable immunodeficiency (CVID) and

Bronchiectasis is a well known association. The association of auto immune diseases described are Rheumatoid Arthritis, Systemic Lupus Erythematosus, Sjogren's syndrome, Ankylosing spondylitis, Scleroderma and Hashimoto's Thyroiditis (Autoimmune Thyroiditis). There have been reports of Bronchiectasis and Hashimoto's Thyroiditis (Autoimmune Thyroiditis), almost all of them are associated with hypothyroidism. There are no case reports in the medical literature describing association between Hashimoto's Thyroiditis (Autoimmune Thyroiditis), and hyperthyroidism with multinodular goiter co-existing with Bronchiectasis. Hence, we have reported this rare case presentation.

Figure – 2: CT scan of the chest showing cystic bronchiectatic changes with mucus plugs in lingular lobe and apical and anterior basal segments of lower lobe on the left side.



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