

## Localized *Aspergillus* Thyroiditis In Patients With Diabetic Nephropathy

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### INTRODUCTION

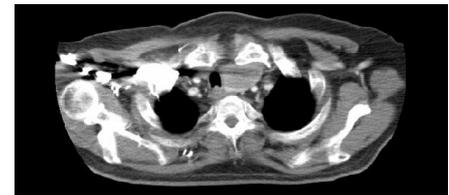
Aspergillosis is increasingly recognized as an important opportunistic pathogen in immunocompromised patients. Fungal infections of the thyroid are uncommon. Previous autopsy studies revealed that 9-15% of disseminated invasive aspergillosis involves the thyroid. Most patients with thyroidal invasion remain asymptomatic and it is usually difficult to diagnose in the antemortem period. The underlying conditions of Aspergillosis included hematological malignancies, organ transplantation, and autoimmune diseases treated with corticosteroids and cytotoxic drugs.

To our knowledge there was no reports in the literature about the aspergillus thyroiditis in dialysis patients. In this presentation, we demonstrated relief of symptoms and improvement of the aspergillus thyroiditis in patient with chronic renal failure (CRF) due to diabetic nephropathy who was treated with voriconazole

### CASE REPORT

A 65-year-old man, who had been on hemodialysis for 18 months due to renal failure secondary to diabetic nephropathy was admitted to our nephrology department due to disseminated atrhalgy and malaise. He was scheduled to receive three sessions of hourly HD per week. Patient had a history of diabetes mellitus for more than 10 years and used insulin regularly. On admission, vital signs were stable. There were no pathologic findings on physical examinations. On admission, blood leukocyte count was 5800/mL, erythrocyte sedimentation rate (ESR) was 62 mm/hour, procalcitonin was 0.4 ng/mL, and C-reactive protein (CRP) was 332 mg/L (normal level 0-5mg/L). Routine blood, urine and sputulum cultures of patients were negative. During the following period, patient had no fever. Chest X-ray showed no abnormality. Computed tomographic scan of all body was taken for investigation of elevated CRP and ESR. Cranial, abdominal and pelvic tomography revealed no abnormality. Chest tomography revealed left thyroid lobe enlargement with nearly 3x3 cm hypodense nodular lesion in the left thyroid lobe.

Thyroid ultrasonography (USG) was taken to investigate the thyroid. Thyroid USG revealed; right lobe size was 42x22x48 mm, left lobe size was 45x26x54 mm and isthmus size was 7 mm and nonencapsulated, mix-echoic (70% solid, 30% cystic) nodule 38x25 mm in size with microcalcification at the left lobe (figure). Thyroid function test was normal. A fine needle aspiration biopsy was performed to determine the aetiology of thyroid nodule. Cytologically, there was benign thyroid epithelium with inflammatory debris as well as filamentous organisms with septate hyphae and acute angle branching (45 degrees), consistent with *Aspergillus* infection. High resolution computed tomography (HRCT) of the chest was taken for investigation of aspergillosis focus. HRCT of the chest showed no evidence of intrapulmonary fungal lesions. Cultures of the sputulum and thyroid aspiration were negative for aspergillus. We started voriconazole treatment. After treatment with voriconazole, CRP was reduced from 332mg/L to 5mg/L, ESR was reduced from 62mm/hour to 11 mm/hour and symptoms were relieved.



### CONCLUSION

In conclusion, localized *Aspergillus* thyroiditis is an uncommon presentation of aspergillosis. Many risk factors and conditions have been described for the development of disease, but there are no reports in patient with renal failure secondary to diabetic nephropathy. A high index of suspicion is necessary for early diagnosis and treatment, which are essential to good outcome.