



# An Unusual Case of Fungal Thyroiditis in a Patient who was already on Antifungal Therapy

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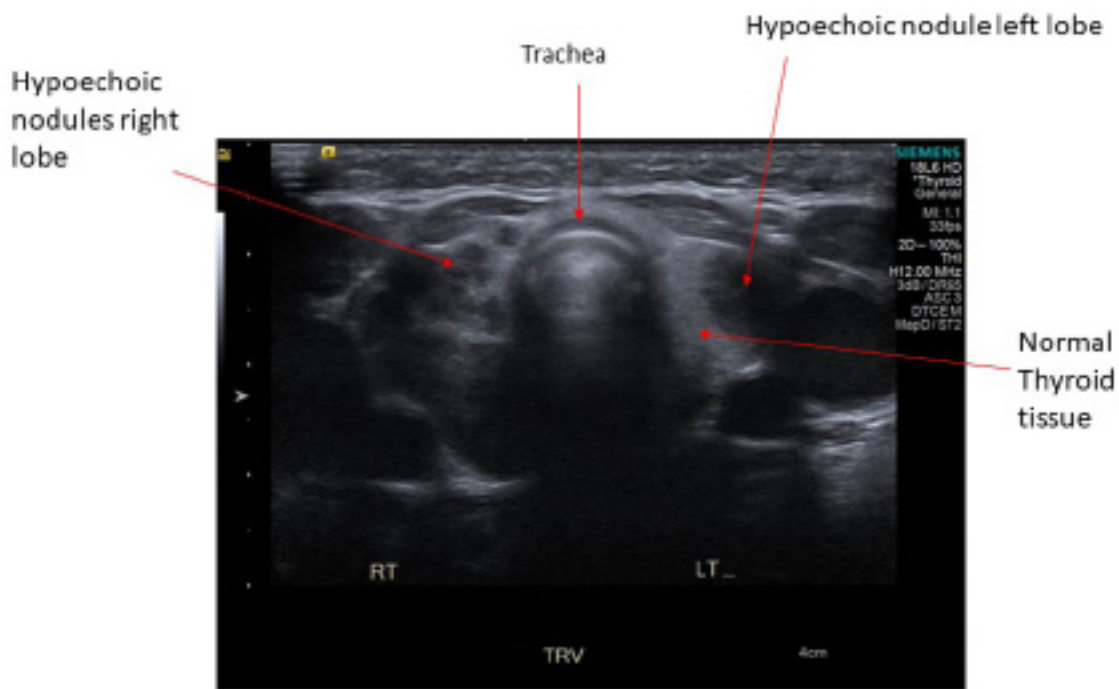
## Clinical image description

A 9-year-old girl was started on induction chemotherapy for Pre-B Acute lymphoblastic leukemia. 2 weeks into treatment she developed fever and hematemesis. Computerized Tomographic scans (CT) of sinus, chest and abdomen demonstrated esophagitis, colitis and pancreatitis, else unremarkable. Esophageal biopsy showed numerous fungal yeast and hyphae. Due to limited tissue availability only surgical pathology was pursued, culture was not sent. Serial blood cultures were sterile. Fever and hematemesis improved on treatment with Micafungin. However, 10 days into treatment fevers relapsed. Repeat CT scans about two weeks in to Micafungin treatment detected multiple kidney lesions and enlarged, heterogenous thyroid gland (new findings). Thyroid Ultrasound confirmed solid appearing, multiple hypo echoic areas in both lobes (Figure 1). This was felt to be

suspicious for fungal thyroiditis vs neoplastic infiltration. Micafungin was discontinued and patient was placed on amphotericin deoxycholate. She became afebrile, but had difficulty tolerating amphotericin. Biopsy of thyroid nodule was performed, and fungal cultures were negative but, candida albicans DNA was detected. Patient was transitioned to fluconazole monotherapy. Repeat scans 3 months into treatment showed improvement of lesions both in kidney and thyroid. Micafungin is a highly protein bound drug and is known to penetrate poorly into nervous system, ocular fluids and urine. Not much is known about thyroid penetration. This case suggests that thyroid penetration is likely poor. Knowledge of echinocandin pharmacokinetics is important in treating disseminated candidal infections.



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**Figure 1:** Ultrasound scan of the thyroid gland demonstrating multiple hypoechoic areas in both lobes.