A Hal’o a Case

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Introduction

A 68-year-old man initially presents with shortness of breath, lethargy and pancytopenia. He is subsequently diagnosed with acute monoblastic and monocytic leukaemia (AMML) from a bone marrow aspirate and trephine biopsy. He is given intensive chemotherapy (daunorubicin and cytarabine) with antifungal posaconazole prophylaxis. He was initiated on antibiotics to treat neutropenic sepsis, but respiratory symptoms persisted.

Surgical Management

The patient was transferred to a tertiary referral cardiothoracic centre where he underwent a lobectomy and rib resection. Histology confirmed a large fungal ball demonstrating fungal elements suggestive of \textit{Aspergillus sp.} which had invaded a 78mm section of rib as well as the right upper lobe.

The patient remained on systemic antifungal therapy until he died from relapse of his AMML on day 268.

Learning Points

- Fungal infections can cause destructive osteomyelitis
- Fungal infections can require complex multidisciplinary management
- Fungal infections can often be colonised by multiple organisms
- Isavuconazole is a useful new antifungal drug
- It does not normally require therapeutic drug monitoring, however the therapeutic window is not well established.

Imaging

CT imaging revealed an expanding mass in the right upper lobe with an ‘air-crescent’ or ‘halo’ sign. The patient was commenced on empirical liposomal amphotericin.

Despite antifungal therapy, the mass continued to grow in size. A repeat CT scan demonstrated that the mass had invaded the second anterior rib causing a fracture. An additional antifungal isavuconazole was added.

Chest radiograph from day 73 demonstrating second anterior rib fractures and a large mass in the right upper zone.

CT scan from day 27 demonstrating the ‘air crescent’ or ‘halo’ sign, suggestive of aspergilloma.