**INTRODUCTION**

Mycobacterium avium complex (MAC) was a rising pathogen in HIV patients during the AIDS pandemic. It was estimated that at least 26.9 out of 1,000 individuals per year were infected between 1994-1997 with HIV. With the development of Antiretroviral Treatment (ART), these numbers decreased significantly. However, a relatively new phenomenon known as MAC-Immune Reconstitution Inflammatory syndrome (MAC-IRIS) emerged. It manifests as either a form of unmasking a previously undiagnosed infection or as a paradoxical worsening of an underlying infection with initiation of ART.

**CASE**

- **38 year old AA male with cognitive deficit** presents with 3-4 months of shortness of breath, cough, sore throat and weight loss
- **Diagnosed with HIV with VL of 1,440,000 and CD4 of 30. Started on ART.**
- **Readmitted 2 months later with poor oral intake, continued weight loss and left lateral neck mass**
- **Repeat VL of 2,710 and CD4 of 131.**
- **X-ray and CT chest showed bilateral hilar adenopathy and heterogeneous ground glass opacities.**
- **Core biopsy of neck mass showed necrotizing granulomatous lymphadenopathy.**
- **Differentials included infection, sarcoidosis and lymphoma.**
- **AFB culture from biopsy identified MAC.**
- **With new atypical infection within 3 months after initiation of ART, and VL decrease by Log10, patient met major criteria for IRIS.**

**DISCUSSION**

Despite progression in the treatment for HIV, IRIS continues to pose a significant challenge in treatment management with increased morbidity and mortality. A recent prospective study by Vinhaes et al. compared inflammatory markers between MAC-IRIS, Viral-IRIS and control patients without infections.

Their study showed a correlation of up-regulation of biomarkers as possible predictors of MAC-IRIS. Unfortunately our patient did not have baseline inflammatory markers prior to initiation of ART.

Further studies into these inflammatory markers may predict which patients are at greater risk of developing MAC-IRIS and potentially use these biomarkers as possible therapeutic targets to suppress the inflammatory response, as well as guide duration of treatment against the immune response.

**REFERENCES**


**IMAGES**

Left upper: Chest X-ray showing bilateral hilar adenopathy with 5.4 cm mass like density overlying the right hilum. Right upper: CT neck showing severe adenopathy on the left, extending from the level of the pharynx to the upper mediastinum.

Left lower : CT chest showing supraclavicular, hilar and mediastinal adenopathy as well as heterogeneous alveolar ground-glass, centrilobular nodular opacities with bronchiectasis. Right lower: Neck, Core Biopsy; Necrotizing (Star) Granulomatous Lymphadenitis, with granulomatous inflammation (Arrow) (courtesy of Drs. Gina Murray and Kotaro Takeda for providing the pathology image)