Title: Acute Eosinophilic Pneumonia in a Patient with Long Standing Behcet's Syndrome

Authors: Naranjo JC MD, Jafari SE MD, Loftis C MD, Dulgheru EC MD

Background:
Behcet's syndrome (BS) is a multisystemic disease that frequently manifests as oral and genital ulcers. Pulmonary involvement occurs in approximately 18% of patients and can have complex clinical manifestations, including vascular disease, hemorrhage, infarctions, and organizing pneumonia. Broad-spectrum radiological findings like loss of lung volume, lung opacities, and indistinct nodular or reticular lesions have been described. There is little data on the association between Behcet's disease and eosinophilic pneumonitis; the latest is usually characterized by eosinophilic infiltration of the lung parenchyma caused by a hypersensitivity reaction to an inhaled antigen. Patients usually present with nonproductive cough, dyspnea, fever, and constitutional symptoms, mimicking many pulmonary conditions. Diagnosis is based upon clinical criteria and bronchoalveolar lavage with >25 eosinophils present. Management includes supportive care, antibiotics, and chronic immunosuppression, usually with high-dose steroids and mycophenolate.

Case Presentation:
A 40-year-old woman with a history of long-standing Behcet's syndrome, eczema, and allergic rhinitis, chronically immunosuppressed with mycophenolate mofetil, presented with acute onset shortness of breath, weakness, and productive cough and fever. Initial workup evidenced eosinophilia and elevated inflammatory markers. PCR for COVID-19, mycoplasma, legionella, HIV, and respiratory cultures were negative. Chest X-ray showed bilateral airspace opacities associated with small pleural effusions that were also evident on CT angiogram; reactive hilar and mediastinal lymphadenopathy was also noted. The patient was started on oxygen supplementation, IV antibiotics with Levofloxacin, and mycophenolate mofetil was discontinued. Bronchoscopy with bronchoalveolar lavage was performed and was remarkable for increased eosinophils suggestive of acute eosinophilic pneumonitis. The patient was started on IV methylprednisolone with further symptomatic improvement.

Conclusion:
Due to its prothrombotic nature, pulmonary involvement in Behcet's syndrome is mainly secondary to vascular disease. The association between BS and eosinophilic pneumonia is infrequent, making the diagnosis and treatment challenging due to the non-specific symptomatology and broad-spectrum differential diagnosis. Currently, there are no diagnostic criteria other than clinical and bronchoalveolar lavage with the presence of eosinophils. Immunosuppression therapy has shown to be beneficial, although there is still a lack of evidence regarding the length and dosing of glucocorticoid therapy.