



# Bacillary layer detachment (BALAD) associated with systemic lupus erythematosus (SLE)

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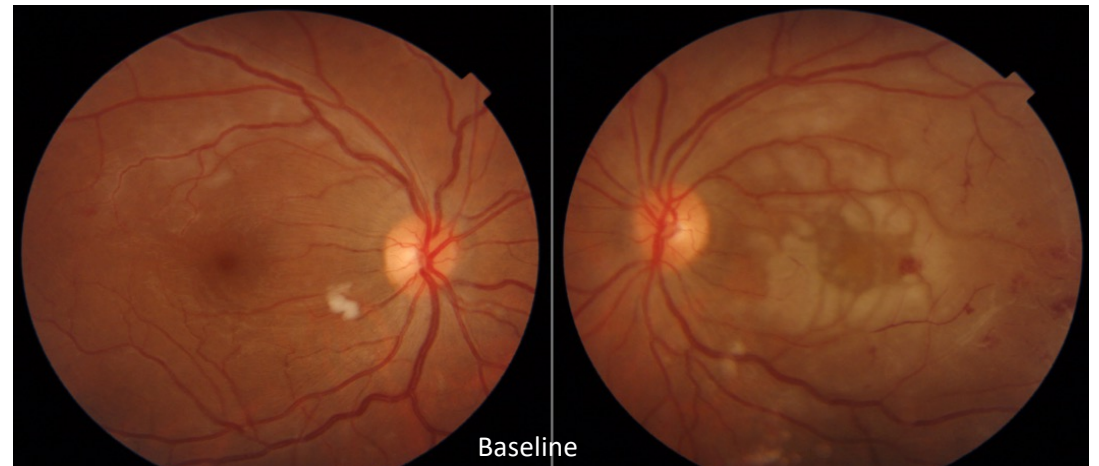


## **Introduction:**

BALAD is an optical coherence tomography (OCT) finding characterized by the separation of the myoid and ellipsoid layers of the photoreceptors, usually with subretinal fluid and choroidal thickening. It is observed in various ocular conditions, predominantly inflammatory diseases. This report examines BALAD in a patient with SLE, presenting as occlusive vasculitis.

## **Methods:**

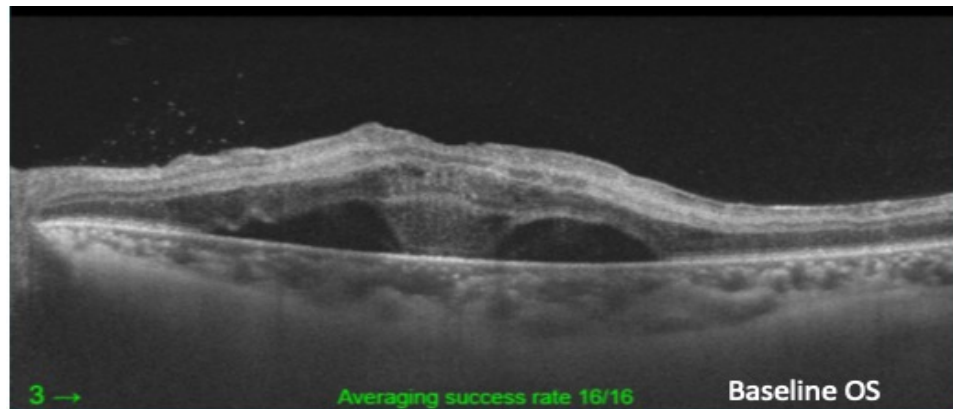
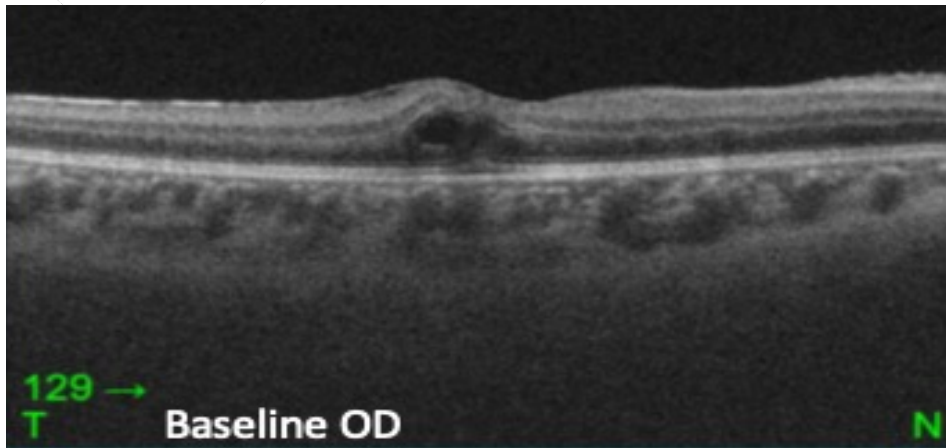
Review of medical records and literature on BALAD's association with SLE.



## **Case Report:**

A 29-year-old female developed eye pain and vision loss in her left eye, with prior joint pain and oral ulcers.

Vision was 20/60 in the right eye (OD) and limited to hand movement in the left (OS). Fundus examination showed hypochromic regions suggestive of ischemia, cotton wool spots, and diffuse hemorrhages in OS.



### Diagnostic Tests:

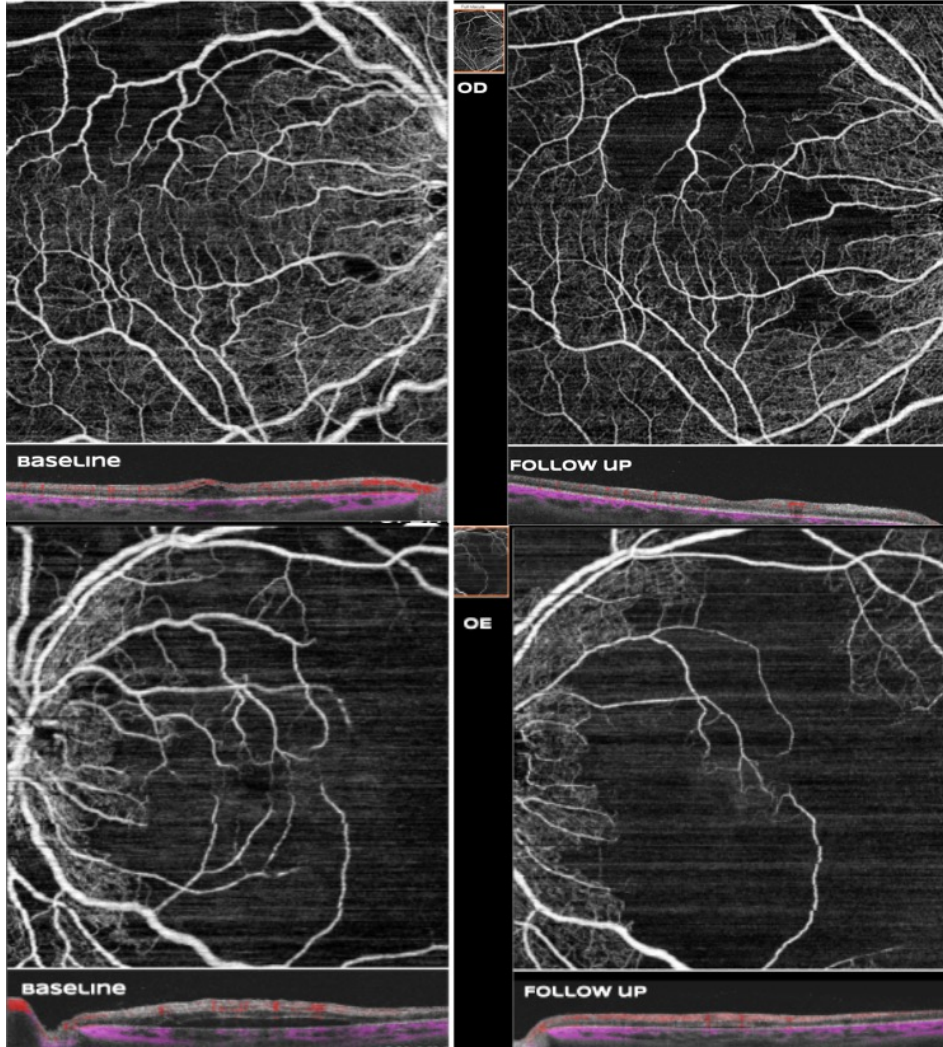
OCT revealed increased reflectivity of the inner retina at the peripapillary area with macular edema in OD, and diffuse inner retina hyperreflectivity with posterior shadowing, indicative of acute arterial occlusion in OS. A BALAD was observed in the foveal region.

OCT-Angiography showed non-perfusion areas affecting the posterior pole and macula in both eyes.

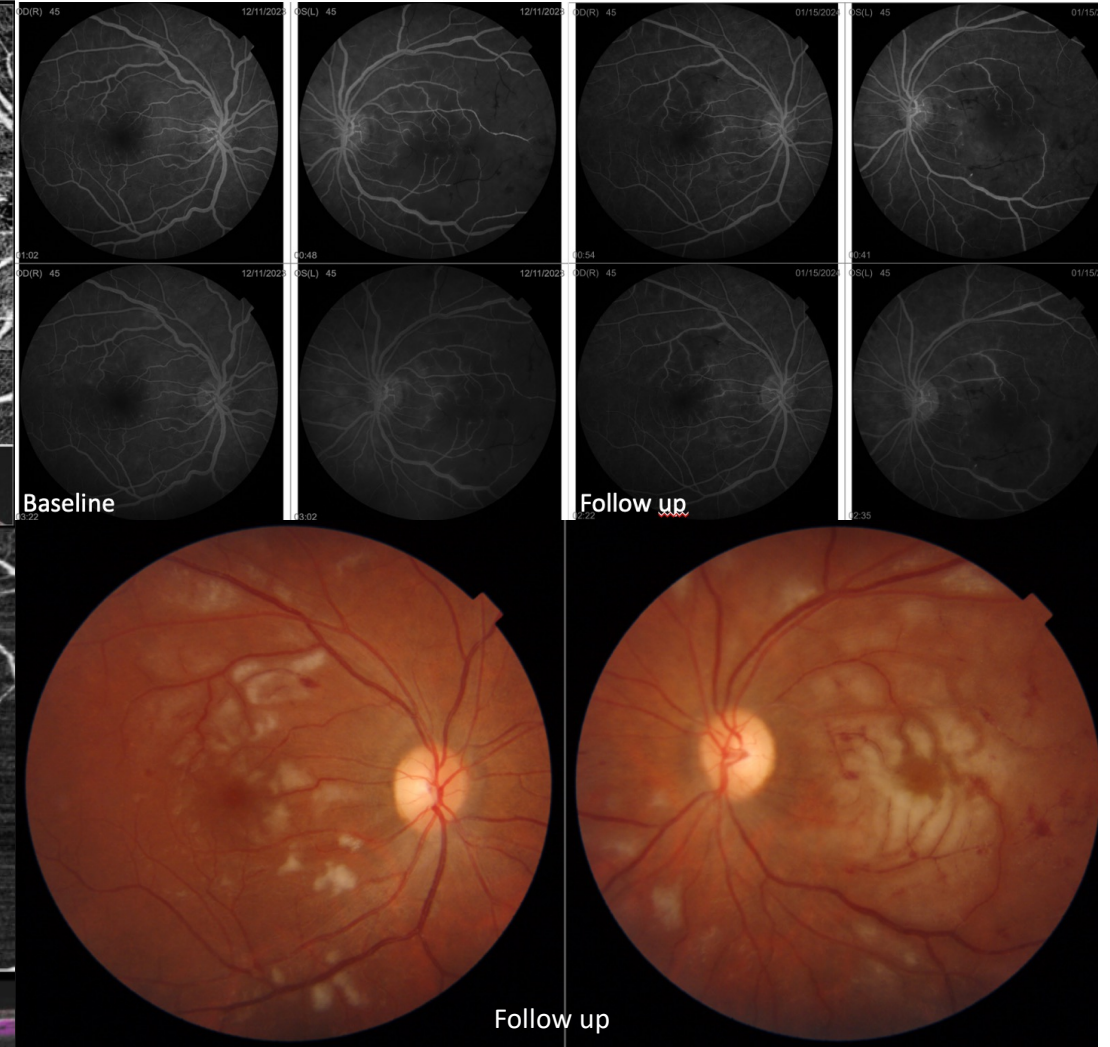
Fluorescein angiography (FA) indicated late vessel hyperfluorescence due to leakage related to vasculitis and extensive hypofluorescence due to ischemia in OS.

Blood tests ruled out infectious diseases and confirmed SLE with: high erythrocyte sedimentation rate (ESR), high antinuclear antibodies (ANA) titer of 1/640 with a fine speckled nuclear pattern and 1/160 with a homogeneous nuclear pattern, high anti-Smith antibody, high anti-Ro/SSA and anti-La/SSB, and low complement proteins.

# OCT-Angiography

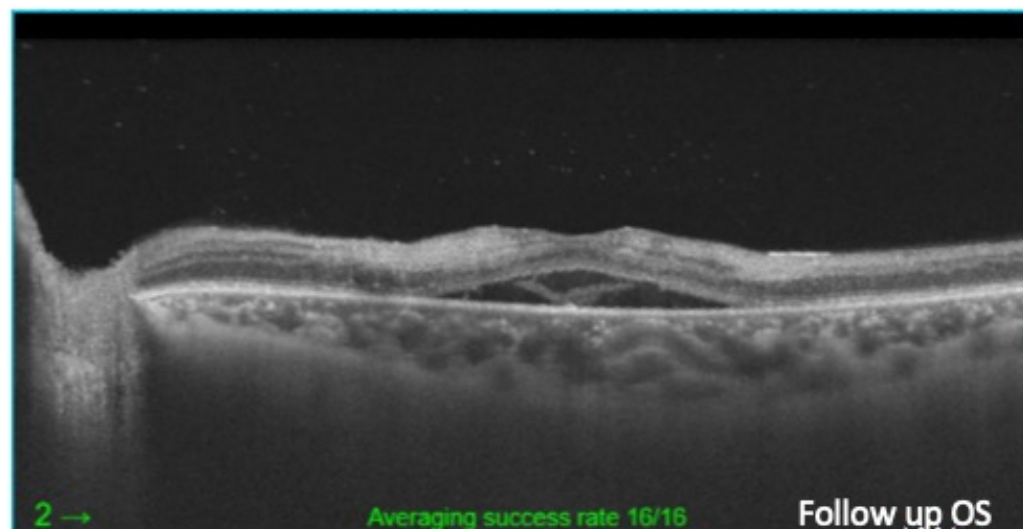


# Fluorescein Angiography





The patient received high-dose steroids, cyclophosphamide, anticoagulants, and hydroxychloroquine. After one month of treatment, the vision was improved to 20/20 in OD and count fingers in OS, but retinal ischemia remained severe. In follow up OCT demonstrated worsening inner retina hyperreflectivity in both eyes with a decrease in retinal cysts and serous detachment. OCT-A showed an increase in areas of non-perfusion. FA reduction in hyperfluorescence leakage due to vasculitis.





### **Discussion:**

This case is one of the first reports of BALAD associated with SLE, highlighting the importance of considering systemic autoimmune diseases in patients presenting with ocular findings such as BALAD. This case report underscores the significance of recognizing BALAD as a potential ocular manifestation of SLE. Early detection and interdisciplinary management are crucial for preserving vision and managing systemic involvement in such cases.

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