

Silent Progression to Blindness: A Case for Proactive CMV Retinitis Surveillance in HIV

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Objective

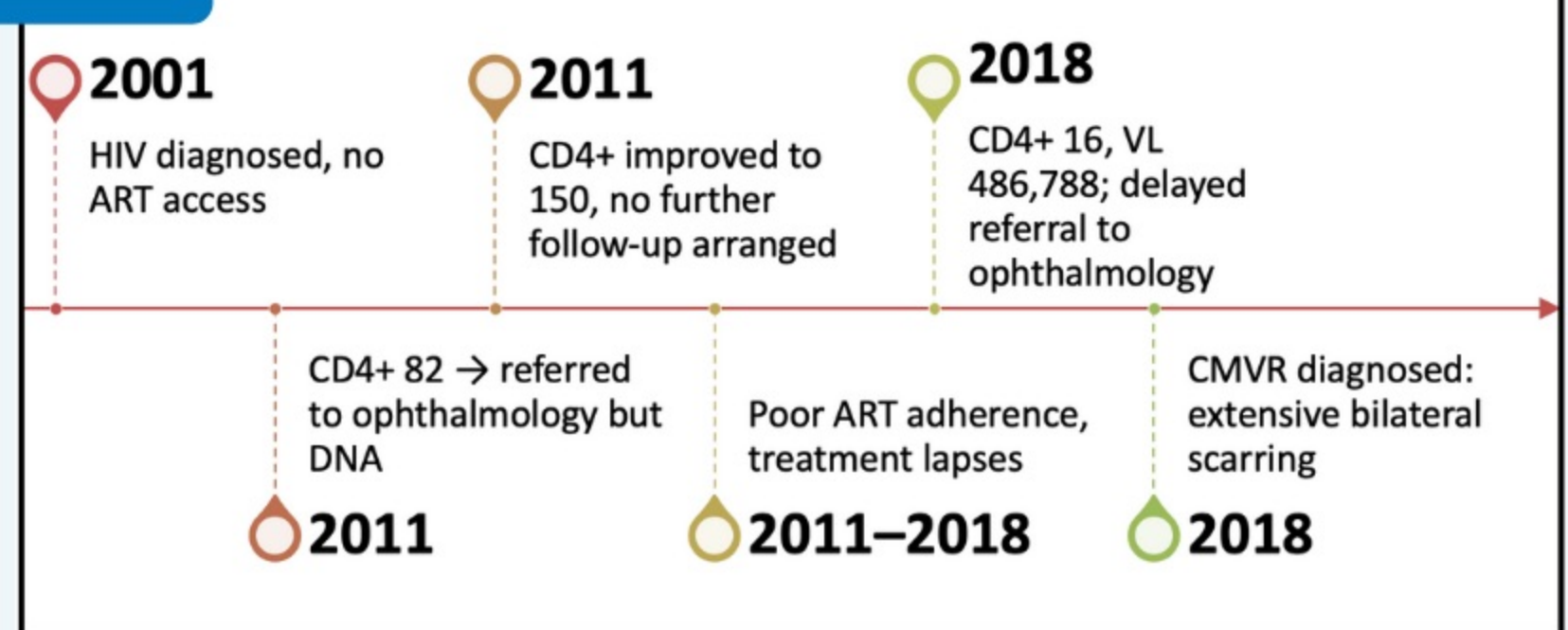
Cytomegalovirus retinitis (CMVR) remains a major cause of blindness in patients with AIDS. Despite an 80% decrease in incidence with antiretroviral therapy (ART), individuals with CD4+ counts <50 cells/ μ L remain at high risk.¹

Aims: To highlight the risk of delayed diagnosis and irreversible vision loss from CMVR in advanced HIV with transient CD4+ recovery.

Methodology

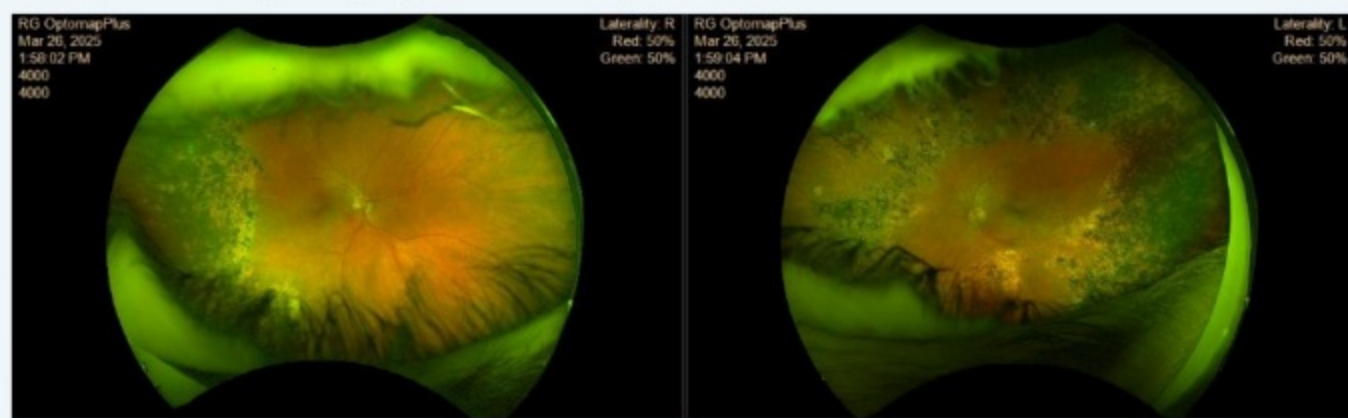
We present a single-patient case report of CMVR, highlighting the timeline of care, CD4+ fluctuations, and ophthalmic findings. Clinical data was reviewed alongside local audit and national guidelines on CMV risk at varying CD4+ threshold.

Results

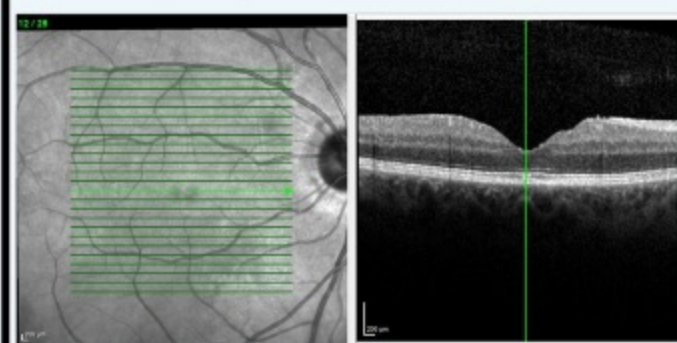


Images

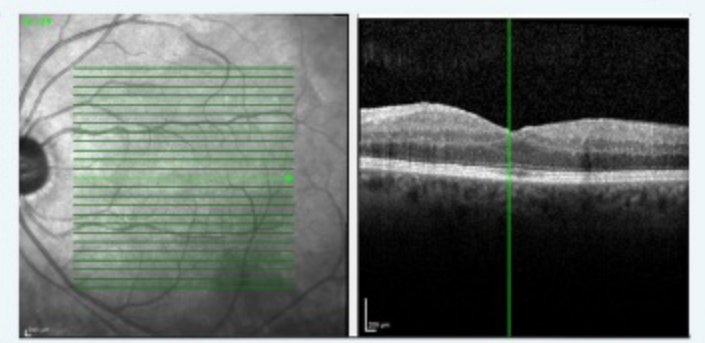
Colour fundus photographs of both eyes



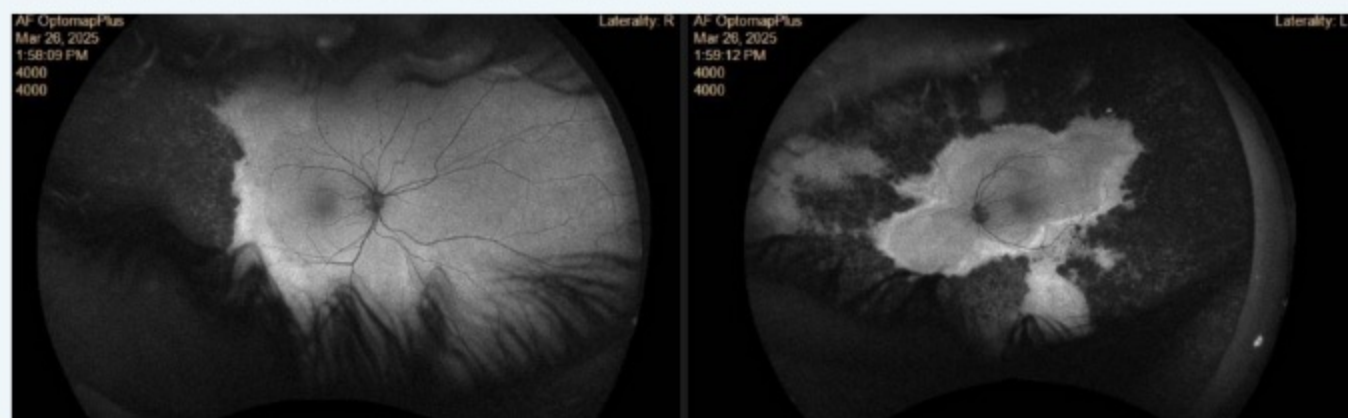
OCT, right eye



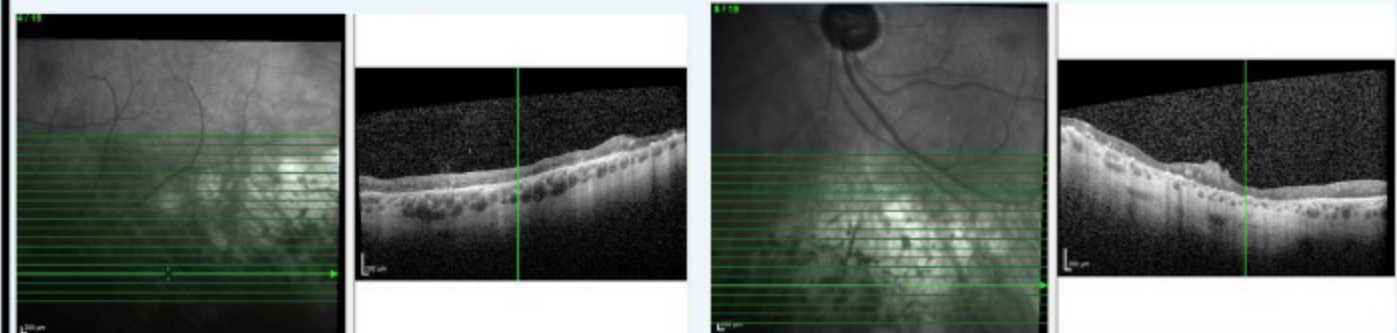
OCT, left eye



Fundus autofluorescence of both eyes



Additional OCT images, left eye



Discussion

- CMVR remains a major cause of blindness in advanced HIV despite widespread ART.²
- Reliance on CD4+ recovery alone can underestimate ongoing infection risk, especially with poor ART adherence or fluctuating CD4+ counts.³
- Current referral thresholds (<50 cells/ μ L) may not account for complex treatment histories or transient CD4+ gains.^{3,4}
- Early ophthalmology input and proactive surveillance are key to preventing irreversible vision loss.²

Future Directions

- Develop risk-based screening algorithms that include adherence, viral load, and prior immunosuppression.⁴
- Evaluate optimal timing and frequency of ophthalmic surveillance in unstable immune recovery.
- Strengthen multidisciplinary care pathways linking HIV, infectious disease, and ophthalmology services.
- Update guidelines to reflect real-world ART adherence challenges and nuanced patient risk.^{3,4}

Conclusion

Timely ophthalmology input and integrated multidisciplinary care are essential for high-risk HIV patients, particularly those with limited ART access or adherence challenges.

References

