Letter to the Editor

Anti-Recoverin Antibodies in Cancer-Associated Retinopathy: An Early Clue to Occult Small Cell Lung Cancer

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Clinical Perspective

Cancer-associated retinopathy (CAR) remains an uncommon but potentially devastating paraneoplastic disorder, often presenting to ophthalmologists with isolated visual symptoms. Among the recognised antiretinal autoantibodies, anti-recoverin antibodies are strongly associated with small cell lung carcinoma (SCLC) and may precede the diagnosis of malignancy by several months.[1–3] With advances in immuno-modulatory therapies, early recognition of this association deserves renewed attention.

Recoverin is a 23-kDa calcium-binding protein localised to rod and cone photoreceptors. Aberrant expression of recoverin by tumour cells can trigger a systemic autoimmune response. Circulating anti-recoverin antibodies may subsequently cross the blood–retinal barrier and induce photoreceptor apoptosis.[2,3] This process involves calcium-dependent pathways and caspase activation.[1] Clinically, patients typically present with night blindness (nyctalopia) and progressive visual field constriction, often with minimal early fundoscopic abnormalities but markedly abnormal electroretinographic findings.[4]

Visual symptoms frequently precede the identification of the underlying malignancy.[2] However, patients presenting with unexplained nyctalopia may be misdiagnosed with inherited retinal disorders, toxic retinopathy, idiopathic retinal degeneration, or retinitis pigmentosa. Such diagnostic delays may postpone appropriate oncological assessment and consideration of immunomodulatory treatment.[1,4]

Historically, treatment outcomes in CAR have been poor, largely because of delayed recognition and irreversible photoreceptor damage.[4] Recent advances in immunomodulatory approaches, including B-cell depletion with rituximab, neonatal Fc receptor (FcRn) inhibition, complement inhibition, and combination immunosuppressive strategies, have shown potential for stabilising or improving visual function, particularly when treatment is initiated early. [1,4] These developments further emphasise the importance of timely and accurate diagnosis.

We propose that antiretinal antibody testing, particularly for anti-recoverin antibodies, should be considered in patients with suspected CAR who present with unexplained nyctalopia, photopsia, or rapidly progressive visual field loss.[1,4] Detection of anti-recoverin antibodies should prompt a thorough evaluation for an underlying malignancy, including appropriate chest imaging to investigate for SCLC, even in the absence of respiratory symptoms.[2,3]

In the era of precision medicine, failure to recognise a potentially informative paraneoplastic biomarker may represent a

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missed opportunity for both vision preservation and early cancer detection. Incorporating targeted antiretinal antibody testing into the diagnostic evaluation of suspected CAR may facilitate earlier recognition and more timely multidisciplinary management of this potentially sight-threatening condition.

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