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Low titre autoantibodies against recoverin in sera of patients with small cell lung cancer but without a loss of vision

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Low titre autoantibodies against recoverin in sera of patients with small cell lung cancer but without a loss of vision
Previous ArticlePulmonary pleomorphic (spindle) cell carcinoma: peculiar clinicopathologic manifestations different from ordinary non-small cell carcinoma
Next ArticlePhase I/II trial of docetaxel and vinorelbine in patients with non-small cell lung cancer previously treated with platinum-based chemotherapy

Abstract

To date, many authors have described the presence of autoantibodies against various neuronal proteins, paraneoplastic antigens (PNA), in a serum of patients with different kinds of malignant tumors located outside the nervous system. These autoantibodies may cross-react with the corresponding PNA or their epitops present in neurons and thus initiate the development of a variety of neurological disorders, paraneoplastic syndromes (PNS), even though the primary tumor and its metastases have not invaded the nervous system. Cancer-associated retinopathy (CAR) is a rare ocular PNS induced by autoantibodies against several retinal antigens, one of which is a photoreceptor calcium-binding protein, recoverin. Only several CAR patients with a few kinds of cancer (endothelial carcinoma, breast cancer, epithelial ovarian carcinoma) have so far been found to contain autoantibodies against recoverin in their sera. As for lung cancer, the majority of CAR cases mediated by anti-recoverin autoantibodies have been revealed in patients with the most malignant lung cancer, small cell lung carcinoma (SCLC), and only one similar case has been described for a patient with non-small lung carcinoma. The common feature of all these anti-recoverin-positive patients, irrespective of the type of cancer, is the presence of both the CAR syndrome and high titres (as a rule, more than 1:1000) of the underlying autoantibodies in their serum. In this study, we have used recombinant myristoylated recoverin to screen serum samples of 50 patients with SCLC by Western blot and revealed 5 individuals with low titres of anti-recoverin antibodies, who have no manifestation of a loss of vision. To our knowledge, this is the first report on the presence of low titre autoantibodies against recoverin in a serum of patients with cancer, but without visual dysfunction.

Keywords

- Small cell lung carcinoma
- Paraneoplastic neurological syndrome
- Autoimmune
- Cancer-associated retinopathy
- Paraneoplastic autoantigen
- Recoverin

Abbreviations:

CAR, cancer-associated retinopathy (), PNS, paraneoplastic neurological syndromes (), RAbs, anti-recoverin autoantibodies (), SCLC, small cell lung carcinoma ()

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