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Case report and the role of SIRT1 in the pathogenesis of the adenoma of the retinal pigment epithelium

Abstract:

To report a rare case of RPE adenoma in Chinese and discuss the role of SIRT1 in the pathogenesis of RPE adenoma. Clinical examinations performed including B-scan, color Doppler, MRI, and histology; immunohistochemical analysis of the expression of HIC1, SIRT1, P53, and molecules such as cytokeratin, vimentin, S-100, NSE, HMB45, and Ki-67 was performed after enucleation. Clinical Examination revealed early hypofluorescence and late hyperfluorescence in the tumor and the existence of tumor-feeding vessels. There was high intensity on theT1-weighted magnetic resonance imaging (MRI) and low intensity on the T2-weighted MRI. Histopathologic analysis revealed the tumor cells were derived from adjacent normal RPE cells; the tumor was composed of cords and tubules of partially pigmented cells with round to oval nuclei. Immunohistochemical testing showed the tumor cells were positive for cytokeratin, vimentin, S-100, neuron-specific enolase, HMB45, and Ki-67. An important finding was that the abundant SIRT1 expression was associated with low levels of HIC1 and acetylated P53 in the RPE adenoma. The diagnosis of RPE adenoma largely depends on histologic examination after enucleation. Deregulation of HIC1, SIRT1, and p53 may be the major event in the pathogenesis of RPE adenoma.

Biography

Xiaohua Li has completed his PhD at the age of 30 years from Zhongshan University and she has finished her fellowship from University of Southern California and University of California, Los Angeles. She is the director of pathology department of Henan Eye Hospital, Henan Provincial People's Hospital. He has published more than 40 papers in reputed journals.