Reviewer's report

Title: Branch Retinal Artery Occlusion Following Radiation Therapy to the Head and Neck: A Case Report

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Reviewer: Sohan S Hayreh

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Jiang and colleagues present a case of “Branch Retinal Artery Occlusion Following Radiation Therapy to the Head and Neck”.

The findings in the case support their diagnosis of “Branch Retinal Artery Occlusion”. This was obviously caused by embolism because there were multiple Hollenhorst plaques.

The authors postulate that in this patient there was “unilateral radiation-induced atherosclerosis”. There was 70-99% stenosis in the left carotid artery. There are two important considerations here. Radiation per se does not cause atherosclerosis, it causes stenosis. In the patient “Past medical history was significant for hyperlipidemia, and family history was significant for coronary artery disease”. Thus it seems radiation-induced atherosclerosis in this case was caused by combination of radiation and hyperlipidemia.

The eye had multiple Hollenhorst plaques. A recent study (see Ophthalmology 2009;116:1928-36.) showed that it is the presence of plaques in the carotid artery which plays much greater role rather than stenosis. In this case in the atherosclerotic carotid artery, there must have been plaques. Authors provide no information about that.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests.'