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Case Report

Improved Subjective Visual Function and Best-Corrected Visual Acuity after External Beam Radiation Therapy of Pancreatic Adenocarcinoma Metastatic to the Choroid

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A 65-year-old woman with metastatic pancreatic adenocarcinoma to the liver treated with IV chemotherapy (Gemcitabine/Abraxane) presented with decreased vision in the right eye. Best-Corrected Visual Acuity (BCVA) was 20/150, funduscopic examination revealed a large, yellow-white choroidal lesion with serous retinal detachment extending inferiorly (Figure 1A), and b-scan ultrasonography demonstrated a 12.2 x 11.7 x 3.6mm choroidal mass with high internal reflectivity (Figure 1B). This finding prompted brain/orbital MRI with and without contrast that demonstrated four cerebellar metastases in addition to the known right choroidal metastasis (Figure 1C). Under consultation with radiation oncology, the patient was treated with external beam radiation therapy to the right choroidal lesion and brain. This was via a modified hippocampal-avoidance whole brain approach that also incorporated the right orbit, to 30Gy in 10 fractions, without use of superficial bolus, and with standard, thermoplastic mask immobilization. This decreased the size of the metastasis (Figure 1D), improved the patient's subjective visual function of the right eye, and improved her BCVA to 20/70. Despite escalating the patient's IV chemotherapy regimen to 5FU/Onivyde, the patient expired 1.5 months after radiation treatment from complications related to the patient's metastatic cancer and not from complications stemming from the radiation therapy. Review of the literature shows a small number of case reports of pancreatic adenocarcinoma metastatic to the choroid, with even fewer treated with external beam radiation therapy [1,2]. We report successful reduction in lesion size, with improved BCVA, and improved patient-reported vision-related quality of life with external beam radiation treatment.

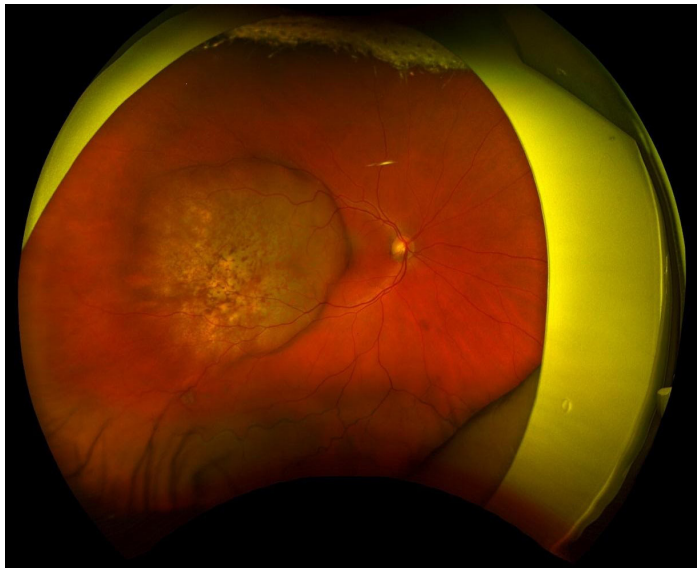

Figure 1A: Wide-field fundus photograph of the right eye with a large choroidal lesion with inferior serous retinal detachment.

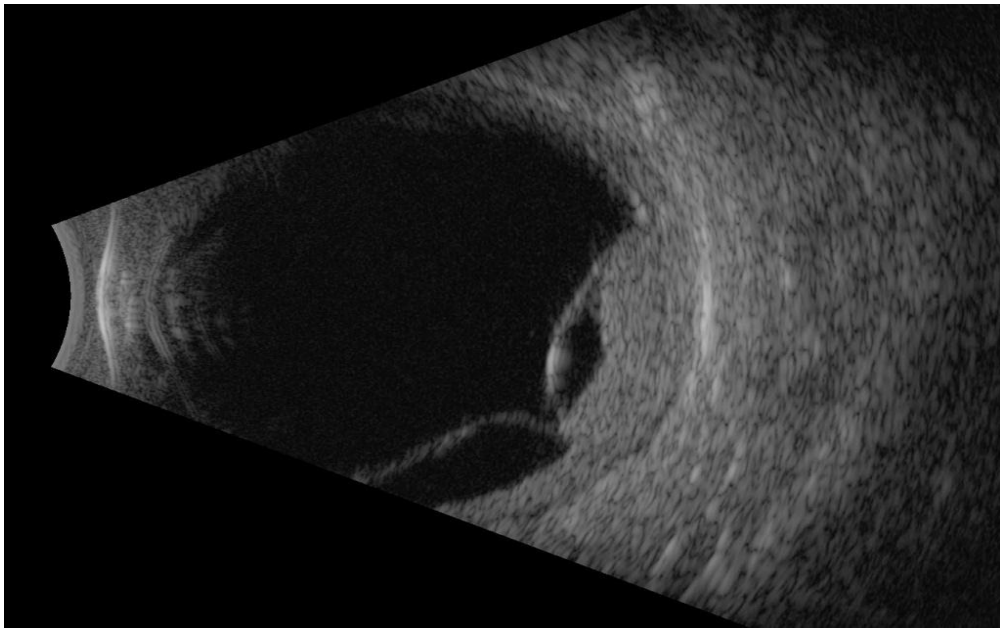

Figure 1B: B-scan ultrasonography demonstrates the high internal reflectivity of the choroidal lesion with inferior serous retinal detachment.

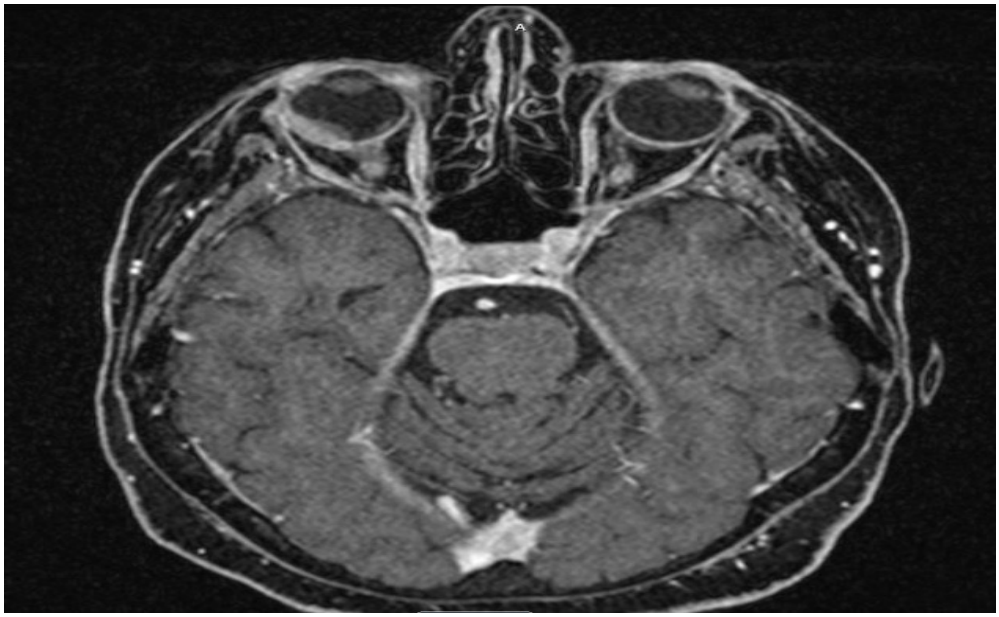

Figure 1C: Contrast-enhanced T1-weighted image with fat suppression demonstrating a large right choroidal lesion (note: no cerebellar metastases are visible in this axial image).

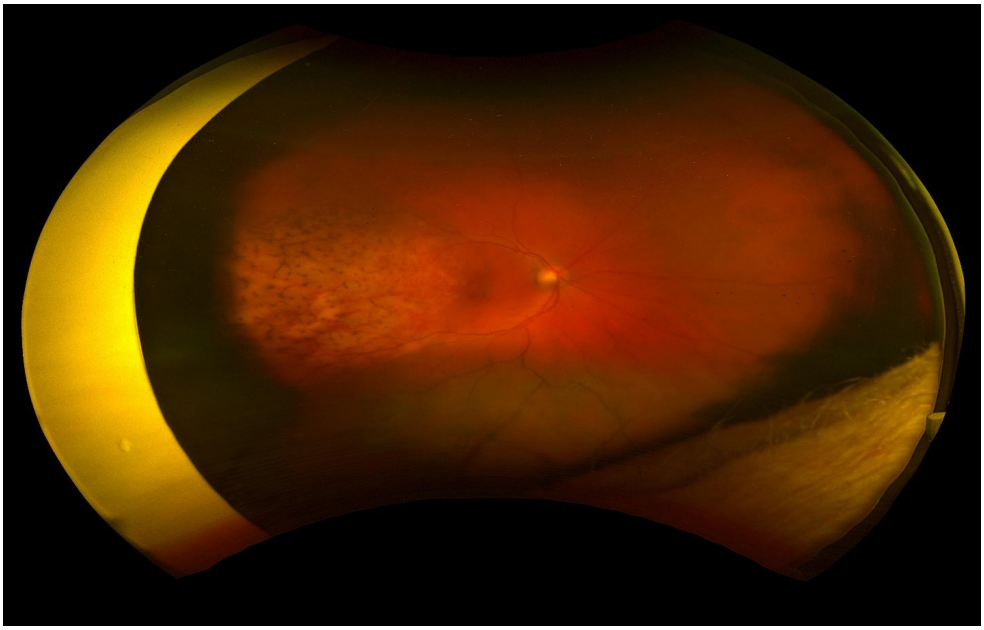

Figure 1D: Follow-up wide-field fundus photograph of the right eye with significant reduction in the size of the choroidal lesion.

Acknowledgement

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