CLINICAL VIGNETTE

Metastatic Adenocarcinoma of Esophagus with Choroidal Metastasis

Dorcas Chi, MD and Melissa Yee, MD

Case Report

73-year-old Caucasian male who first noticed worsening blurry vision in his right eye of 6 months duration. He also reported 15 pounds weight loss. He was found a hypopigmented choroidal mass in the posterior pole of his right eye measuring 2.5 mm in thickness. Orbital MRI showed a 10x2mm rind of enhancing soft tissue at the posterior right globe. CT scan of chest, abdomen and pelvis was negative. EGD revealed a mass from 30-35cm involving about half of the circumference with partial obstruction. Biopsy confirmed intramucosal adenocarcinoma in the background of Barrett's esophagus. CEA was 5.2, Ca19.9 was 449. PET scan revealed a right neck mass 2.5cm with SUV 9.5 and soft tissue density in the right orbit with SUV 3.6. and lastly large FDG avid mass in the mid to distal esophagus measuring 7cm in length with SUV 20. His tumor was MMR proficient, HER2/neu negative. PDL1 was positive with CPS score of 10.

He was started on FOLFOX chemotherapy. After 6 cycles, restaging PET showed resolution of the uptake in the right orbit. He also had improvement in his vision but still with mild diplopia. He had additional 6 more cycles FOLFOX and was then switched to pembrolizumab due to neurotoxicity from FOLFOX. Shortly after, there was concern of regrowth of his right choroidal mass and he underwent gamma knife treatment to the site. He continued to have systemic progression of disease and underwent palliative radiation to primary esophageal tumor, followed by third line treatment with ramucirumab. Unfortunately, PET showed increase in size of right neck mass, new liver lesion, and new osseous involvement. He had about a few months of disease control on ramucirumab and then progressed. He was last seen by Ophthalmology and there was increased choroidal thickness concerning for tumor regrowth. He was transitioned to hospice due to poor performance status and deteriorating condition. He survived total 18 months from time of initial diagnosis.

Discussion

The choroid is an uncommon but well-documented site for metastasis of solid tumors and it is commonly seen in breast and lung cancers. Choroidal metastasis can be found up to 11% of patients at time of autopsy with any known metastatic malignancy.[1] Ones originating from the esophagus are exceedingly rare and a review of multiple case series found that only 8 of total 918 cases (0.87%) of choroidal metastases were attributed to esophagus.[2] Most reported cases of esophageal cancer metastasizing to the site are of squamous histology and only a few cases of uveal metastases from adenocarcinoma of the esophagus have been reported in the literature[3,4] as seen in our case here.

Declined visual acuity, diplopia, visual-field defects, photophobia, or ocular pain are common symptoms of choroidal metastasis. The most frequent sites of GI malignancy to choroid originate from colon and stomach while choroidal metastasis from EC is rare and sporadic.[5] Esophageal cancer distant metastases can leave the esophagus via lymphatic, venal, or arterial routs. Isolated distal metastases in unexpected terminal organs or anatomical structures such as choroid may be explained by the arterial pathway.[6]

Management of choroidal metastases depends on several factors, including primary tumor site, tumor histology, extent of extra-uveal disease, symptomatology, the patient's general health. Once choroidal metastases have arisen, prognosis is generally poor, so the goal of treatment is salvaging vision in a minimally-invasive manner. Whether or not systemic chemotherapy or immunotherapy can effectively treat choroidal metastases remains debatable, but most agree that local therapy is generally warranted at some point during the treatment course. External beam radiotherapy remains the primary treatment modality used in achieving choroidal tumor regression.

As esophageal cancer can have unexpected metastases following any cancer stage, careful physical examination, full body scan, brain/orbit MRI are required. Understanding of esophageal cancer related disease dissemination patterns needs more extensive studies, and these critical data remain the cornerstone of optimal cancer treatment and outcome improvement.

REFERENCES

1. **Date RC, Adams MK, Teh BS, Schefler AC, Musher BL, Farach A, Weng CY**. A rare presentation of choroidal metastasis from primary esophageal adenocarcinoma successfully treated with intensity-modulated radiation therapy. *Am J Ophthalmol Case Rep*. 2018 Apr 23;11:19-22. doi: 10.1016/j.ajoc.2018.04.021. PMID: 30057967; PMCID: PMC6062644.
2. **Jardel P, Sauerwein W, Olivier T, Bensoussan E, Maschi C, Lanza F, Mosci C, Gastaud L, Angellier G,**

Marcy PY, Herault J, Caujolle JP, Dendale R, Thariat J. Management of choroidal metastases. *Cancer Treat Rev*. 2014 Dec;40(10):1119-28. doi: 10.1016/j.ctrv.2014.09.006. Epub 2014 Oct 5. PMID: 25451606.

3. **Parikh HK, Deshpande RK, Swaroop DV, Desai PB**. Choroidal metastasis from primary adenocarcinoma of the esophagus. *J Surg Oncol*. 1993 Jan;52(1):68-70. doi: 10.1002/jso.2930520118. PMID: 8441265.
4. **Eliott D, Salehi-Had H, Plous OZ**. Adenocarcinoma of the esophagus presenting as choroidal metastasis. *Dis Esophagus*. 2011 Feb;24(2):E16-8. doi: 10.1111/j.1442-2050.2010.01170.x. Epub 2011 Feb 10. PMID: 21309919.
5. **Chang SY, Tsai SH, Chen LJ, Chan WC, Tsao YP**. Choroidal metastasis from esophageal squamous cell carcinoma. *Taiwan J Ophthalmol*. 2018 Apr-Jun;8(2):104-107. doi: 10.4103/tjo.tjo_80_17. PMID: 30038890; PMCID: PMC6055309.
6. **Shaheen O, Ghibour A, Alsaid B**. Esophageal Cancer Metastases to Unexpected Sites: A Systematic Review. *Gastroenterol Res Pract*. 2017;2017:1657310. doi: 10.1155/2017/1657310. Epub 2017 Jun 4. PMID: 28659974; PMCID: PMC5474273.