Case Report

Metastatic choroidal melanoma: A therapeutic challenge and role of novel herbal medicines

Nizara Baishya, Manigreeva Krishnatreya, Anupam Sarma, Amal C. Katakia, Saurav Saikia
Departments of Head and Neck Oncology, Cancer Epidemiology and Biostatistics, Pathology, Dr. B. Borooah Cancer Institute, Department of Ophthalmology, Guwahati Eye Hospital, Guwahati, Assam, India

ABSTRACT
Choroidal melanoma (CM) is a common ocular malignancy. We present here a case of a 62-year-old female with a CM with incidental diagnosis of pulmonary metastasis. The diagnosis of CM with incidental metastasis to lungs is rare and presents a therapeutic challenge to the physician in an otherwise healthy individual. The role of herbal medicine should be investigated further for the treatment of metastasis in CM.

Key words: Choroidal melanoma, lung, metastasis

INTRODUCTION
Choroid is the part of the uveal tract between the retina and the sclera. It is the most common site for primary intraocular malignant tumor and second among the 10 malignant melanoma sites in the body.[1] Of all intraocular melanomas, 85.0% were uveal, 4.8% were conjunctival and 10.2% were in other sites.[2] The cause of ocular melanoma is not known, but it may arise from the preexisting choroidal naevi, fair and light colored eyes. Rare instances have been shown to occur among blood relatives.[3] Features suggesting malignancy are clumps of orange pigments, serous retinal detachment, thickness exceeding 2 mm and involvement of optic disc. We present here a case of choroidal melanoma (CM) presenting with asymptomatic multiple pulmonary metastasis in a healthy female patient.

CASE REPORT
A 62-year-old female presented with the complaint of diminished vision in the left eye of 3 months duration. The loss of vision was gradual and painless. There was a history of photopsia. The patient was in good general health and presented with performance status of 0 according to the World Health Organization. On local examination, the right eye had 6/12 vision and the left eye had perception of light only on all four quadrants. Fundoscopic examination showed signs of CM and B-scan ultrasonography (USG) also revealed features of CM [Figure 1]. A contrast-enhanced computed tomography scan (CT scan) of the orbit showed a CM in the superior quadrant of the left globe with intact optic nerve [Figure 2]. The patient was planned for enucleation on the left side. Routine radiologic examination of the chest showed right-sided pleural effusion [Figure 3a]. CT scan of the thorax showed enhancement on the right upper lobe of the lung suggestive of pulmonary metastasis [Figure 3b]. CT-guided fine needle aspiration cytology (FNAC) confirmed the diagnosis of CM with lung metastasis [Figure 4]. In view of pulmonary metastasis, the patient was offered palliative care only.

DISCUSSION
CM is more commonly seen in the white and black population, and Asians are relatively at a lower risk of developing CM.[4] The median age of patients with CM is around 55 years, which is frequently seen in males,
except for the age group of 20-39 years.[3] The incidence of CM is rare in children, ranging from 0.6% to 1.65% below 15 years of age.[5] However, our case was a female aged 62 years. CM remains asymptomatic for a long time and is usually diagnosed on routine ophthalmoscopy incidentally.[6] Presentation of symptoms depends on the location of the tumor. Rarely, painful loss of vision with cataract and proptosis may be the presentation in advanced CM due to transscleral orbital extension of the tumor. In our case, the patient presented with a gradual painless loss of vision. A careful past medical history of nonocular malignancy is important to rule out the presence of a metastatic lesion. There is an increased risk of 6-10% of CM in the presence of second neoplasm.[7] In our case, the patient did not had second primary malignant tumor. Ultrasonography (USG) in A and B mode are the important diagnostic tests and helps in diagnosing tumor of 3 mm thickness with 95% accuracy.[8] In our case, tumor of 5 mm thickness was present on B scan USG. CT scan of the orbit helped in diagnosing the extraocular extension and to differentiate between choroidal or retinal detachment and solid tumor. In the present case on CT scan, the lesion had not extended to the retrobulbar or extraocular region. Also, the optic nerve was normal. Invasive procedures like biopsy and FNAC of the orbit are not performed now-a-days due to significant morbidity and associated risk of tumor seedling along the needle tract.[9] Choroid is a highly vascular organ with less lymphatic network. The route of distant metastasis is mostly hematogenous. The most common site for CM metastasis is the liver (90%), followed by the lung (24%) and bone (16%).[10] In our case, there was right-sided pleural effusion on chest skiagram. Furthermore, the presence of multiple pulmonary metastases was detected on CT scan of the thorax and cytological diagnosis was made by FNAC of the lung lesion. In general, the prognosis and survival in patients with metastatic CM is poor.[11] Prognosis depends on tumor histology, metastasis at the time of diagnosis and the organ affected. The cumulative rates of metastasis in the Collaborative Ocular Melanoma study at 5 and 10 years after treatment were 25% and 34%, respectively.[10] Metastasis remains the main cause of death even after control of the primary intraocular tumor. Patients with asymptomatic metastasis have a slightly
longer survival than those with symptomatic metastasis, which necessitates further investigation. In our case, the patient presented with a good performance status with an incidental diagnosis of the concurrent pulmonary metastasis. Extrahepatic metastases have significantly longer survival. The median survival in the presence of liver metastasis is around 6 months, and with extrahepatic metastasis it is 19-28 months.[12]

A detailed clinical and radiological examination to detect distant metastasis should be carried out prior to primary surgical excision of CM. The diagnosis of CM with incidental metastasis to the lungs is rare and presents a therapeutic challenge to the physician in an otherwise healthy individual, as the role of conventional systemic chemotherapeutics is not effective in metastatic CM.[12] The role of herbal medicine in melanoma[13] needs to be investigated further for the treatment of metastasis to the lungs in CM.

REFERENCES