



Case Report

MALIGNANT MELANOMA OF LEFT SOLE METASTASIS TO BRAIN: A CASE REPORT.

Nabir Hossain¹, Avisak Bhattacharjee²

Abstract

A 60-year-old man presented with malignant melanoma on left heel with left inguinal lymph node metastasis. He developed right hemiparesis on the 3rd POD of wide local excision of an ulcerated lesion of the left sole. CT scan showed multiple cerebral metastasis in the both parietal lobes. No neurological features also manifested before operation of the primary lesion.

Key Words: Malignant melanoma, Surgical resection, Multiple Metastases.

Introduction

Cutaneous malignant melanoma is the third most common cause of cerebral metastases in men after lung.¹ The reported incidence of brain metastases (BM) is 10% to 40%.²

Brain metastasis usually occurs within a few years after removal of the primary malignant melanoma, although 5 to 15 years may elapse in some cases. Death touches patients usually within a few months after the clinical manifestation of BM; however, longer survival has also been reported.³

Of all primary tumors, it has the highest propensity to metastasize to the brain—up to 75% of all patients who died from melanoma harbor brain metastases and in 50% of these patients, brain metastasis is the cause of death.⁴

Multiple metastases to the brain from malignant melanoma are not uncommon. These tumors are highly vascular which has higher tendency to bleed.¹

Case Report

Mr. Abhinash Chandra Sarker, 60 years old Hindu Farmer, hailing from Kishoregonj was admitted into the NICRH in 12-02-2015 with the diagnoses of malignant melanoma of (Lt) sole as well as (Lt) sided inguinal lymphadenopathy. The histopathology report of

ulcerative lesion of (Lt) foot was poorly differentiated malignant tumor whereas FNAC of the (Lt) inguinal lymphadenopathy was found metastatic malignant melanoma. The patient received 3 cycle chemotherapy; combination of cisplatin & Dacarbazine (DTIC) from 15-11-2014 to 15-01-2015. After facing the tumor board the all parameters were thoroughly assessed. The local part X-ray revealed no bony involvement, the ultrasound of abdomen revealed normal sonologic findings & chest X-ray showed no sign of metastasis. The all routine biochemical parameters were within normal limit.

The ulcerative lesion of left sole was only 2 x 3 cm in size. Which was just over the anterior aspect of (Lt) heel; it was blackish in color surrounded by multiple satellite nodule.

No intransit deposits was evident. The (Lt) inguinal lymph nodes were enlarged, multiple in numbers, hard and fixed with one another as well as fixed with overlying skin but free from underlying structures.

The patient revealed no history & signs of hepatic, pulmonary, bony & cerebral metastasis. After adequate pre-operative work up we did wide local excision of the primary lesion and inguinal lymph node dissection of the ipsilateral side.

The post operative outcome was uneventful upto the 3rd POD. But then the patient suddenly experienced right sided hemiparesis. The GCS was 15, the MRC

1. Junior Consultant; Surgical oncology, NICRH, Mohakhali, Dhaka.
2. Assistant Registrar; Surgical Oncology, NICRH, Mohakhali, Dhaka.

muscle strength was 3/5, the bowel & bladder control were intact, no significant focal neurological deficit except the hemiparesis. Then the CT scan of brain was done and Bilateral cerebral metastases were diagnosed.

Discussion

Melanomas are the third most common source of intracranial metastases after breast and lung carcinomas.⁵ CNS metastasis is the most worrisome feature of malignant melanoma, leading directly to death in the majority of patients.⁶ The blood-brain barrier is relatively impermeable to chemotherapeutic agents, that explains the disappointing results with cisplatin, fotemustine, lomustine and dacarbazine.⁷

A standard treatment for patients with metastatic malignant melanoma has not been yet established. The prognosis of cerebral metastasis of malignant melanoma is poor. The median survival time ranging between 2 to 10 months.⁸

Prospective randomized trials have demonstrated the benefit of surgery for the treatment of a single metastasis in the brain.⁹ So, surgery is the choice of treatment for the majority of patients with a single metastatic lesion,^[28] but only a few selected patients with multiple metastases in the brain are treated surgically.¹⁰

The main aim of a simultaneous one-stage resection for multiple metastatic lesions is limited improvement in the quality of the patient's limited remaining life, so the indications are extremely limited.

In the present case, the patient presented with multiple large distant symptomatic metastatic lesions. The one-stage operation using two approaches has several risks. The patient's surgical position must be changed under general anesthesia, and the operation time is longer, and more invasive. Nevertheless, the significant reduction of intracranial pressure obtained by surgery may produce immediate and dramatic improvements of the patient's neurological symptoms. The conventional treatment for multiple metastatic brain tumors is radiotherapy.^{9,10}

Conclusion: The superiority of surgical treatment over radiotherapy for managing multiple metastases in brain from primary malignancy is nothing but the immediate reduction of intracranial pressure.

References

1. American Brain - Tumor association. <http://www.abta.org/secure/metastatic-brain-tumor.pdf> [accessed on April,10-2015]
 2. Sampson JH, Carter JH Jr, Friedman AH, Seigler HF. Demographics, prognosis, and therapy in 702 patients with brain metastases from malignant melanoma. *J Neurosurg.* 1998;88:11-20.
 3. Bauman, M. L., and Price, T. R.: Intracranial metastatic malignant melanoma: Long term survival following subtotal resection. *South. Med. J.* (1972)65:344-346.
 4. Vieth, R. G., and Odom, G. L.: Intracranial metastases and their neurosurgical treatment. *J. Neuro- surg.* (1965) 23:375-383.
 5. Kingdom TT, Lalwani AK, Pitts LH. Isolated metastatic melanoma of the cerebellopontine angle: case report. *Neurosurgery*, 1993; 33: 142-144.
 6. Budman DR, Camacho E, Wittes RE. The current causes of death in patients with malignant melanoma. *Eur J Cancer*, 1978; 14: 327-330.
 7. G Gupta, AG Robertson and RM MacKie. Cerebral metastases of cutaneous melanoma. *British Journal of Cancer* (1997) 76(2), 256-259.
 8. Ferraresi V, Ciccarese M, Zeuli M, Cognetti F. Central nervous system as exclusive site of disease in patients with melanoma: treatment and clinical outcome of two cases. *Melanoma Res*, 2005; 15: 467-469.
 9. Noordijk EM, Vecht CJ, Haaxma-Reiche H, Padberg GW, Voormolen JH, Hoekstra FH, Tans JT, Lambooi N, Metsaars JA, Wattendorff AR, Brand R, Hermans J. The choice of treatment of single brain metastasis should be based on extracranial tumor activity and age. *Int J Radiat Oncol Biol Phys*, 1994; 29: 711-717.
 10. Konstadoulakis MM, Messaris E, Zografos G, Androulakis G, Karakousis C. Prognostic factors in malignant melanoma patients with solitary or multiple brain metastases. Is there a role for surgery? *J Neurosurg Sci*, 2000; 44: 211-218.
- Assouline A, Levy A, Chargari C, Lamproglou I, Mazon JJ, Krzisch C. Whole brain radiotherapy: prognostic factors and results of a radiation boost delivered through a conventional linear accelerator. *Radiother Oncol.* 2011; 99: 214-217.