

EFFICACY OF COMBINED IMMUNOTHERAPY IN MELANOMA BRAIN METASTASES : A CASE REPORT

MC Torrieri, F Masuzzo, S Gentile, MT Giordana, L Pinessi, I Rainero

Department of Neurosciences "Rita Levi Montalcini", Città della Salute e della Scienza, Turin, Italy.

Introduction. Melanoma causes the majority of skin cancer-related deaths and brain metastases (BM) are the most common cause of death. BRAF gene mutations are present in 50% of patients with advanced melanoma. BRAF inhibitors, like dabrafenib, are currently used in treatment of patients with BM carrying the BRAF V600E mutation. Current clinical studies are investigating new treatment options such as combined BRAF and MEK inhibitors, like the so-called CombiDT.

Case report. A 52 years old man was admitted to the Neurological Division of the Department of Neurosciences in Turin with a diagnosis of primary progressive aphasia, debuted three years before. Recently he had been developing quickly progressive speech difficulties, cognitive disorganization and lack of memory. Seven years earlier, the patient underwent surgical resection of a skin melanoma, located in the frontal scalp; pathological stadiation was IIA, pT3aN0M0, Clarke level IV. A regular follow up showed no tumor relapse and the last brain MRI, dated back to six months, just revealed a severe cortical bitemporal atrophy. We performed a contrast CT brain that detected a contrast-enhanced lesion in the temporal and parietal left cortex (maximum diameter 8 cm), with contralateral midline shift, addressing us to a melanoma metastasis. After the exclusion of other metastases, the patient underwent a surgical macroscopically complete resection of the lesion and the istological exam confirmed the diagnosis of melanoma, with the BRAF mutation V600E. The patient started the treatment with dabrafenib with both a radiological and clinical good response about the aphasia and the autonomy in daily-life activities. After two months of treatment, a combo-therapy dabrafenib-trametinib was begun, further increasing the clinical benefit, with regard to speech comprehension and thought organization.

Discussion. In patients with brain metastases prognostic factors such as number of brain metastases and symptoms, extracerebral metastases, and ECOG status are considered during therapeutic planning. An established treatment for singular BM is neurosurgical resection. Combined BRAF and MEK inhibition outperformed BRAF inhibitors as single agents in three randomized clinical trials, with an excellent efficacy; unfortunately, no survival data are available for this subset of patients. Combination therapy improves response rate, progression-free survival and overall survival and it changes the adverse event profile when compared to dabrafenib alone.

Conclusions. The good response seen in our patient suggests that the combo-therapy should enter in therapeutic algorithms for patients with metastatic malignant melanoma and BRAF gene mutations.

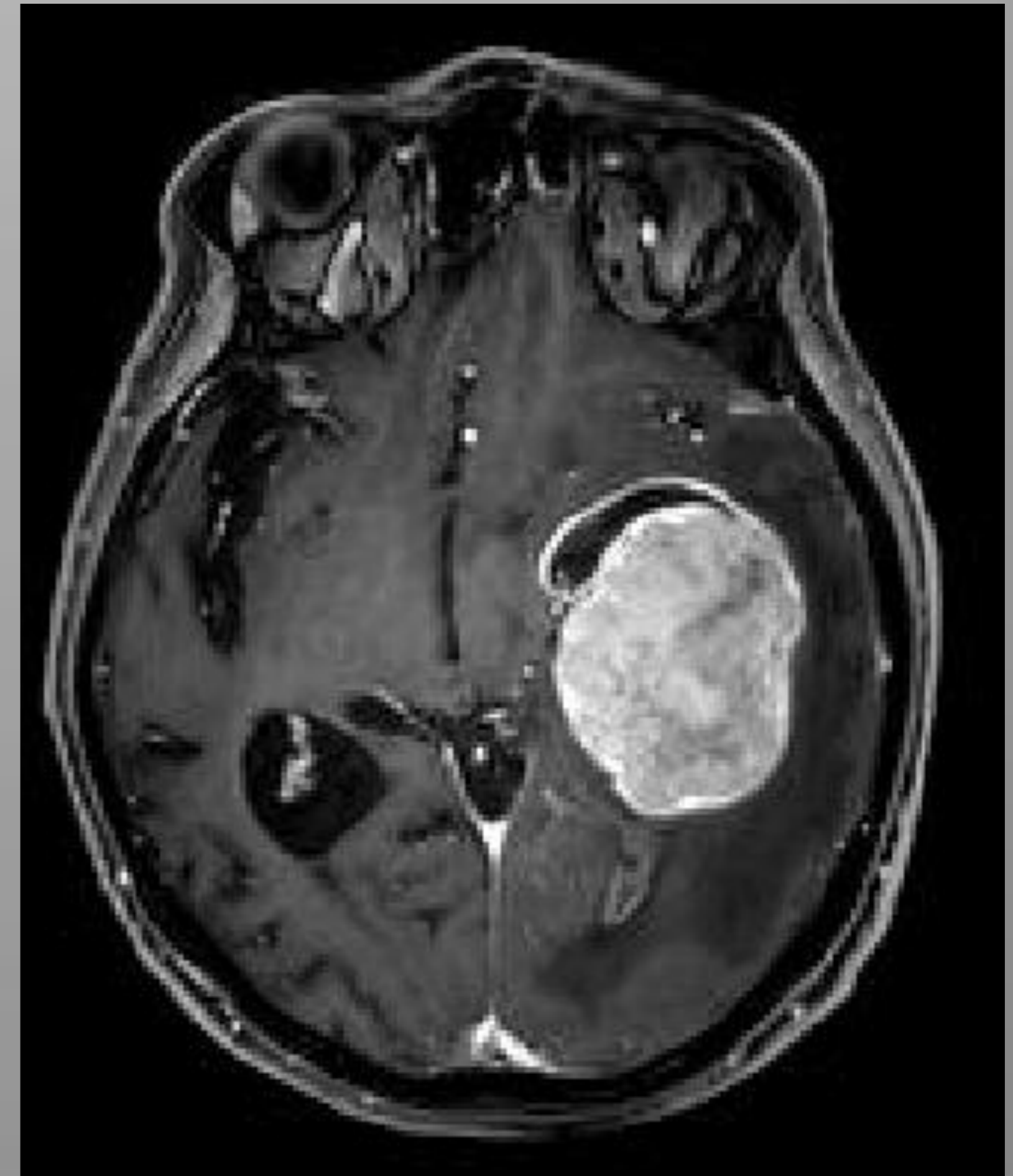


Fig. 1: Brain melanoma metastasis located in the temporal and parietal left cortex at the diagnosis, before the treatment.

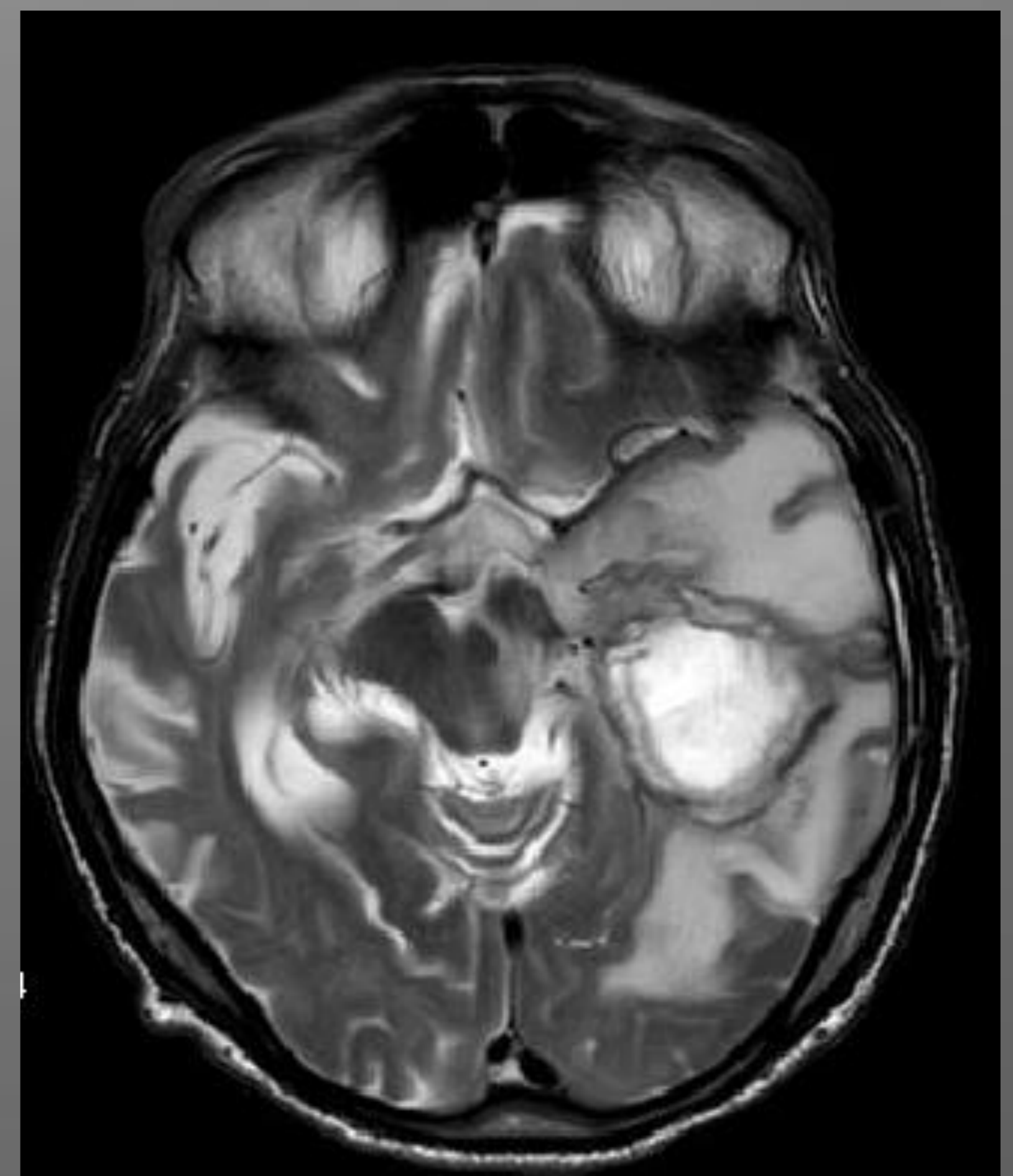


Fig.2: Brain melanoma metastasis at 5 months from the diagnosis (patient in treatment with combo-therapy after surgical resection).

References.

- Galván-Banqueri M, Ubago-Pérez R, Molina-López T. The relative clinical efficacy of trametinib-dabrafenib and cobimetinib-vemurafenib in advanced melanoma: an indirect comparison. *Journal of Clinical and Pharmacy Therapeutics*. 2016 June; 41(3):285-9. Spain L, Julve M, Larkin J.
- Combination dabrafenib and trametinib in the management of advanced melanoma with BRAFV600 mutations. *Expert Opinion on Pharmacotherapy*. 2016., May;17(7):1031-8.
- Spagnolo F, Picasso V, Lambertini M, Ottaviano V, Dozin B, Queirolo P. Survival of patients with metastatic melanoma and brain metastases in the era of MAP-kinase inhibitors and immunologic checkpoint blockade antibodies: A systematic review. *Cancer Treatment Reviews*. 2016 Apr;45:38-45.