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ANALYSING THE IMPACT OF SIZE OF BRAIN METASTASES IN THE OVERALL SURVIVAL OF PATIENTS WITH PRIMARY HEAD AND NECK CANCER, MELANOMA AND SARCOMA

Antonio Manuel da Silva Ribeiro Mota[1, 2], RoldaoM[1,2], Silva P[1], Pedro C[1], Ferreira N[1], Fonseca J[1], Viveiros C[1], Fonseca L[1], Colaco R[1], Matos A[1], Netto E[1,2] and Santos F[1]

[1]Instituto Portugues de Oncologia de Lisboa Francisco Gentil (IPOLFG), Portugal
[2]Nova Medical School, Portugal

Introduction: Management of brain metastases (BMs) depends on important prognostic factors such as age, performance status (PS), primary cancer and the status of extracranial disease. Until now, the size of brain metastasis (BM) is used to decide the therapeutic approach but not as a prognostic factor.

Methods: A retrospective and single center study of patients having primary head and neck cancer, melanoma or sarcoma who were diagnosed of BMs from 2006 to 2015 was analysed. Patients were selected by number of BMs (≥4) and/or by size of the biggest BM (≥3cm). The primary outcome was to evaluate the association between the size of BM and overall survival (OS) in months, and the second outcome was to evaluate the association between whole brain radiotherapy (WBRT) and OS in months. We compared the association by baselines covariates using log-rank test and Cox proportional hazards regression.

Results: 66 patients were collected (median age 63 years old) with primary head and neck cancer, melanoma or sarcoma. In univariate analysis, there was no difference in OS between gender, number of BMs and primary cancer. However, there was a statistical difference in OS when the diameter of the biggest metastasis is ≥3cm (difference in median OS=1.3 months, $p<0.05$). There was also an increase in OS among patients treated with WBRT (difference in median OS=2.5 months, $p<0.05$). In a multivariate analysis, there was no difference in association between the size of BM and OS (Hazard Ratio (HR) = 1.6, 95% CI: 0.82-3.2), p=0.16)

Conclusion: This retrospective study shows no association between BMs' size and OS in patients with primary head and neck cancer, melanoma or sarcoma. However, in this cohort, WBRT improves OS in the group of patients with ≥4 BMs and/or one BM≥3cm.

Biography

António Manuel da Silva Ribeiro Mota has completed his MSc in Medicine from Nova Medical School and finished his Residency in Radiation Oncology from Instituto Português de Oncologia de Lisboa Francisco Gentil in 2015 with the grade of 19.5/20.0 He has undergone a professional training at Mount Vernon Cancer in London in 2014, to improve his knowledge in Radiation Oncology. He has completed his Clinical Scholars Research Training (CSRT) from Harvard Medical School in 2018. Currently, he is associated with Nova Medical School for the Oncology studies and Volunteer Assistant with students from the 5th year of MSc studies. He has published two papers in journals and presented several oral communications in congress and symposium. His area of interest includes Central Nervous System, Hematology and Head and Neck cancer.

amsrmota@gmail.com