

LATE BRAIN METASTASES FROM BREAST CANCER: CLINICAL REMARKS ON 11 PATIENTS AND REVIEW OF THE LITERATURE

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Aims and background: Late brain metastases from breast cancer are a rare event. Only a few cases have been reported in the English literature. The authors describe the clinical and pathological remarks, together with treatment modalities, removal extent and overall survival, of 11 patients in whom brain metastases were detected more than 10 years from the primary tumor.

Patients and methods: Between January 1997 and April 2001, we hospitalized 11 patients, all females, with a histologically proven diagnosis of brain metastasis from breast invasive ductal carcinoma. We defined 'late metastasis' as those metastases that appeared at least 10 years after the breast cancer diagnosis. The median age at the moment of brain metastasis diagnosis was 59 years (range, 47-70), with a median latency time from breast cancer diagnosis of 16 years (range, 11-30).

Results: Ten patients underwent surgery followed by adjuvant radiotherapy (whole brain radiotherapy). Two of them received, after whole brain radiotherapy, stereotaxic radio surgery treatment. One patient had stereotaxic brain biopsy, performed by neuronavigator, followed by palliative corticosteroid therapy. Median survival after brain metastasis diagnosis was 28 months (range, 3 months-4 years).

Conclusions: Although late brain metastases are a rare event, specific neurologic symptoms and neuroradiological evidence of a cerebral neoplasm should be correlated to the presence of a cerebral metastasis, in a patient with a previous history of breast cancer. The longer latency time from breast cancer to brain metastasis could be explained by the "clonal dominance" theory and by different genetic alterations of the metastatic cell, which could influence the clinical history of the disease.

Key words: breast cancer, chemotherapy, late brain metastases, radiotherapy, stereotactic radiosurgery, surgery.