

SURGICAL TREATMENT OF BRAIN METASTASIS UNDER LOCAL ANESTHESIA: CLINICAL IMPACT, EFFECTIVENESS AND SAFETY OF THE PROCEDURE

E. Domina[°], F. Tartara, M. Riva[°], A. Prella^{°°}, M. Grassi^{**}, P. D'Auria, F. Cofano^{***}, G. Pilloni^{***}, D. Garbossa^{***}, A. Ducati^{***}, A. Bonometti^{°°°}, A. Ciccone^{°°°}, S. Panni^{*}, M. Brighenti^{*}, R. Passalacqua^{*}

UO Neurochirurgia, ASST Cremona; * UO Oncologia, ASST Cremona; ** UO Oncologia, ASST Crema; ***Neurochirurgia, Ospedale Molinette, Università di Torino; °UO Neurologia, ASST Lodi; °° UO Neurologia ASST, Crema; °°°UO Neurologia, ASST Mantova.

Introduction: The objective of the study is to evaluate the effectiveness and feasibility of surgical removal of brain metastases under local anesthesia: clinical assessment of the procedure, evaluation of oncological effectiveness and occurrence of postoperative neurological deficits.

Materials and Methods: We included 47 patients (26 females, 21 males) with a mean age 58 years (range 27-71) in the period June 2013 - March 2016. The primary lesion was: lung 20 cases, 17 breast, melanoma 4, colorectal 4, endometrium 1, 1 stomach, bladder 1. The frontale lobe is the most frequent localization with 24 cases (14 temporal, parietal 9, occipital 3). Three patients had double localization. Patients with posterior fossa lesions were excluded.

Results: The surgical procedures were performed with good safety without need of interruption of the procedure. In two cases intraoperative seizures occurred. There were no major new onset neurologic deficits except for two cases of lateral homonymous hemianopia. The average duration of postoperative hospital stay was 3 days (2-7 days). The follow-up varied from 35 to 3 months. Only 15 patients were subjected to postoperative radiation therapy on the treated lesion (32%). Recurrence of the disease was observed in 16/50 lesions (32%). The treatment of brain disease has had a favorable impact on patient survival curves.

Conclusions: The removal of secondary lesions under local anesthesia appears safe and effective ensuring minimal impact on the general condition of the patient and allowing shorter hospitalizations. The monitoring of neurologic function allows greater confidence in the extension of the resection margins. The oncological results are not dissimilar to those reported in the literature. However the increased use of adjuvant radiation therapy after surgery can bring improved results.

