

Place of Radiotherapy in the Treatment of Intracranial Meningiomas: Experience of the Cancer Center Emir Abdelkader of Oran Algeria

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Abstract : Introduction and purpose of the study: Meningiomas are the most common non-glial intracranial tumors in adults, accounting for approximately 30% of all central nervous system tumors. The aim of our study is to determine the epidemiological, clinical, therapeutic, and evolutionary characteristics of a cohort of patients with intracranial meningioma treated with radiotherapy at the Emir Abdelkader Cancer Center in Oran. Material and methods: This is a retrospective study of 44 patients during the period from 2014 to 2020. The overall survival and relapse-free survival curves were calculated using the Kaplan-Meier method. Results and statistical analysis: The median age of the patients was 49 years [21-76 years] with a clear female predominance (sex ratio=2.4). The average diagnostic delay was seven months [2 to 24 months], the circumstances of the discovery of which were dominated by headaches in 54.5% of cases (n=24), visual disturbances in 40.9% (n=18), and motor disorders in 15.9% (n=7). The seat of the tumor was essentially at the level of the base of the skull in 52.3% of patients (n=23), including 29.5% (n=13) at the level of the cavernous sinus, 27.3% (n=12) at the parasagittal level and 20.5% (n=9) at the convexity. The diagnosis was confirmed surgically in 36 patients (81.8%) whose anatomopathological study returned in favor of grades I, II, and III in respectively 40.9%, 29.5%, and 11.4% of the cases. Radiotherapy was indicated postoperatively in 45.5% of patients (n=20), exclusive in 27.3% (n=12) and after tumor recurrence in 27.3% of cases (n=18). The irradiation doses delivered were as follows: 50 Gy (20.5%), 54 Gy (65.9%), and 60 Gy (13.6%). With a median follow-up of 69 months, the probabilities of relapse-free survival and overall survival at three years are 93.2% and 95.4%, respectively, whereas they are 71.2% and 80.7% at five years. Conclusion: Meningiomas are common primary brain tumors. Most often benign but can also progress aggressively. Their treatment is essentially surgical, but radiotherapy retains its place in specific situations, allowing good tumor control and overall survival.

Keywords : diagnosis, meningioma, surgery, radiotherapy, survival

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