

CEREBRAL GLIOBLASTOMA: THERAPEUTIC RESULTS OF A SERIES OF 45 CASES

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SUMMARY

Glioblastoma is the most common and aggressive primary brain tumor, our study aims to clarify the benefit of radiotherapy or radiochemotherapy treatment of glioblastoma using a series of 45 cases collected in the radiotherapy department of CHU HASSAN II Fez over the period from January 2012 to December 2016; whose median age was 55; sex ratio of 2, The most alarming reason for consultation was the signs of HTIC in 34 cases, heaviness of the hemi-body or paraparesis in 25 cases of epileptic seizures in 9 patients and / or visual disturbances in 7 patients, all our patients benefited from brain imaging with CT +/- MRI. The treatment consisted of surgery for anatomopathological evidence, followed by exclusive postoperative radiotherapy or associated radiotherapy. Temodal concomitant and adjuvant, follow-up was marked by recurrence and death in 38 patients remission in 3 patients and 4 patients are without news of follow-up.

KEYWORDS :Glioblastoma, radiotherapy, brain tumor, treatment.**INTRODUCTION**

Glioblastoma is a form of rapidly evolving brain tumor (grade 4 astrocytes according to the WHO classification): half of patients succumb during the year of diagnosis, even after surgical treatment and radiotherapy.

Abreviation

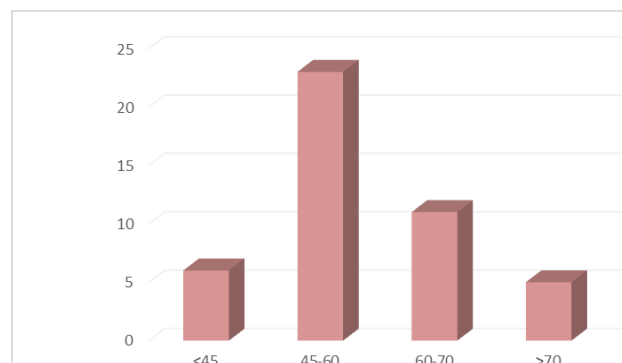
OMS : Organisation mondiale de la santé = World Health Organization
CHU : university hospital center
GBM : glioblastoma
ICHT : intra cranial hypertension
CT scan : Computed tomography
MRI : Magnetic resonance imaging
RTH : radiotherapy

MATERIALS AND METHODS

This is a retrospective study of 45 patient files followed for glioblastoma in the radiotherapy department of HASSAN II Fez CHU over the period from January 2012 to December 2016.

RESULTS

We followed 45 patients whose median age was 55 (between 23 and 79 years) (Figure 1) sex ratio of 2 (30 men and 15 women).

**Figure: 1. Number of cases by age.**

The most alarming reason for consultation was the signs of HTIC in 34 patients 77.7%, heaviness of the hemi-body or paraparesis in 25 cases of epileptic seizures in 9 patients 20% and / or visual disturbances in 7 patients 15.5%.

All our patients benefited from brain imaging with CT +/- MRI, the location was frontal in 11 cases; temporal in 25 cases and occipital in 6 patients (Figure 2)

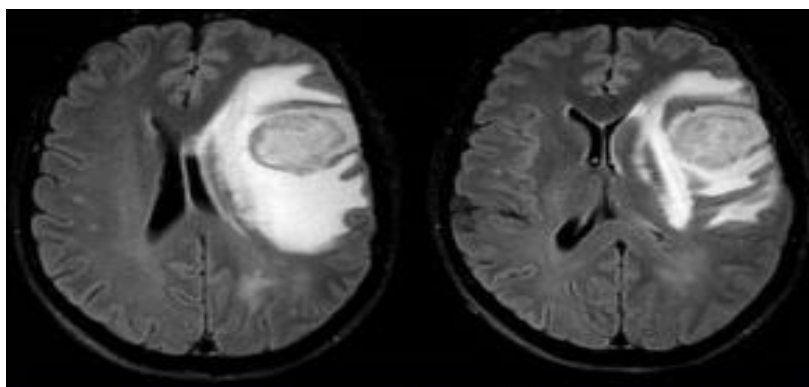


Figure 2. brain MRI axial cut (flair) appearance of a cerebral glioma.

The treatment consisted of macroscopically complete surgery or surgical biopsy followed by exclusive postoperative radiotherapy in 17 cases and the other patients received radiotherapy associated with concomitant and adjuvant temodal. The radiotherapy protocol was hypo-fractionated in 7 patients with exclusive RTH and normal fractionation in 38 patients. (Figure 3)

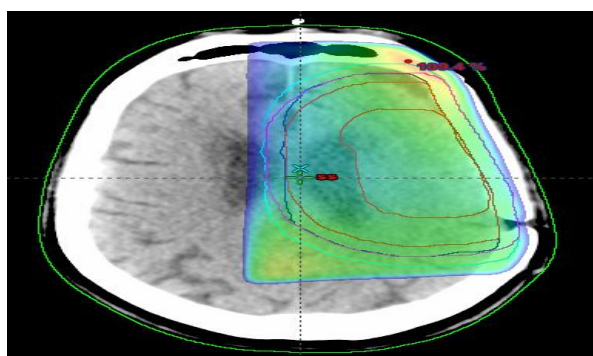


Figure 3. Distribution dose in 3D radiotherapy.

The median follow-up of 15 months was marked by a recurrence and then 38 patients are death, 3 patients are in remission and 4 patients are without news of follow-up.

The probability of overall survival was 81.2% at 6 months, 50.1% at 12 months.

DISCUSSION

The proportion of glioblastomas represents around 4 GBM per 100,000 inhabitants/a year in France.^[1]

Glioblastoma can occur at any age with a median age of 46 to 64.5. Its frequency increases with age. In our series, the median age was 55 years old. (Table 1).

The majority of studies report male predominance; In our series, sex ratio: 2 (Table 1)

Table 1: Distribution of glioblastomas in the literature and in our series according to sex.^[12]

Auteurs	Homme	Femme	Sexe ratio
Delion ^[1]	52,1	47,9	1,09
Bauchet ^[2]	61,7	38,3	1,6
Mineo ^[4]	61	39	1,57
Bartolomei ^[5]	67,13	32,87	2,04
Malkoun ^[6]	69,5	29,5	2,28
Lonjon ^[3]	55	45	1,2
Rogger stupp 2005 ^[7]	62,83	37,17	1,69
Hiroaki shimizi ^[8]	57,7	42,3	1,36
El fane ^[4]	58,18	41,81	1,39
Dans notre serie	59.8	39.1	2

The syndrome of ICHT was found in 10.6% of patients at Delion, 18% at Bauchet, and 60% at Lonjon | .^[1,2,3] In our series it was 77.7%. In several studies, the motor deficit was the revealer of the disease, it was estimated at 38% according to Delion, 35.9% according to Chang 45% according to Lonjon and 66.16%^[1,9,3] in our series 55.5%, CT is still very popular because of its lower cost and greater availability. While MRI is the key examination for the diagnosis of brain tumors. Indicated as first intention.

Radiation therapy should be started within 4 to 6 weeks after surgery, provided scalp healing is achieved. It can start faster in case of a simple biopsy. The influence of the delay between surgery and the introduction of radiation therapy on survival is controversial; because a longer or shorter delay has not been evaluated.^[10,11] (In our series, radiotherapy was done within 5 to 7 weeks after the surgical procedure).

In the Marrakech series, 33 patients received radiotherapy. It was associated with concomitant chemotherapy in 23

patients.^[12] (In our series, exclusive postoperative radiotherapy in 17 cases and 28 patients have benefited from radiotherapy associated with concomitant chemotherapy.

Several authors have studied median survival and the results ranged from 9 to 15.8 months. The median survival of our cases was close to that reported by Délon^[1] or 10.3 months.

CONCLUSION

Glioblastoma is a common brain tumor with an unfavorable prognosis. Multidisciplinary care improves the probability of survival.

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