completion of RT due to an unrelated illness. All 8 skull-base patients are alive at last follow up with no clinical or radiological evidence of disease progression.

Conclusion

Our data shows that dose escalation utilising photons is safe and provides comparable local control rates to proton beam therapy. Longer follow up is needed but hopefully should support the efficacy and toxicity profile associated with dose escalation of photons with more modern planning techniques for this rare tumour.

EP-1198 Whole brain radiotherapy and concurrent temozolomide in multifocal newly diagnosed glioblastoma.

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Purpose or Objective

The medical standard of care of glioblastoma patients relies on radiotherapy (60 Gys) with concurrent temozolomide (TMZ) follow by adjuvant TMZ. Newly diagnosed multifocal and/or multicentric glioblastoma (M/M GBM) are usually treated with TMZ alone avoiding whole brain radiochemotherapy for safety reasons. Therefore, no study investigated safety and efficacy of whole-brain radiotherapy with concurrent TMZ in M/M GBM patients. In our retrospective study, we sought to assess the role of chemo-radiotherapy in this population.

Material and Methods

Eleven patients with pathological proven M/M GBM (≥ 3 lobes) were treated with whole brain radiochemotherapy between April 2009 and September 2017. The median age was 52 years [34-74]. The median dose of radiotherapy was 45Gy at 1.8Gy per fraction over 37 days [29-41], with concurrent TMZ at the dose of 75mg/m². This treatment was followed by adjuvant monthly TMZ (150mg/m²-D1-D5). The median Karnofsky performance status (KPS) at diagnosis was 80% [30-90]. The median recoil time in this study was 5,5 years [0,25-9]. All pathology slides and radiology images were reviewed.

Results

The median overall and progression free survival times for all patients were 7 months [3-25] and 4 months [3-13], respectively. The KPS was stable one month after the beginning of the treatment (Median KPS 70%). Steroids dose was stable or decreased in eight patients during the radiation treatment. Aside alopecia, there was no grade 3-4 toxicity due to radiotherapy. One patient stopped the TMZ during radiochemotherapy period and ten patients received adjuvant TMZ with a median number of 5 cycles [2-8].

Conclusion

Our study supports the safety and the efficacy of whole brain radiotherapy with TMZ in newly diagnosed M/M GBM. Prospective larger study is warranted to confirm our results.

EP-1199 Hypofractionated stereotactic radiotherapy as a salvage therapy for recurrent high-grade gliomas

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Purpose or Objective

The aim of this study was to investigate the survival outcomes and safety of Hypofractioned Stereotactic Radiation Therapy (HFSRT) as a salvage treatment for recurrent high-grade glioma.

Material and Methods

Between March 2012 and March 2017, 32 consecutive patients (12 women, 20 men) treated in a single-center were retrospectively included in this study. Grade III gliomas were diagnosed in 14 patients and grade IV in 18 patients. Thirty-four lesions were treated with HFSRT on LINAC. HFSRT delivered a median dose of 30 Gy (27-30) in six fractions (3-6) of 5 Gy (5-9). The treatment plans were normalized to 100% at the isocenter, and prescribed to the 80% isodose line. Clinical outcomes and prognostic factors were analyzed.

Results

Median follow-up was 20.9 months. Median overall survival (OS) following HFSRT was 15.6 months (Median OS for patients with GBM and grade III glioma were 8.2 and 19.5 months, respectively; p=0.0496) and progression-free survival (PFS) was 3.7 months (Median PFS for patients with GBM and grade III glioma were 3.6 and 4.5 months, respectively; p=0.2424). In multivariate analysis, tumor grade III (p=0.0027), an ECOG status < 2 at the time of reirradiation (p=0.0023) and a mean dose > 35 Gy (p=0.0055) significantly improved OS. A maximum reirradiation dose above 38 Gy (p=0.0179) was significantly associated with longer PFS.

Conclusion

HFSRT is well tolerated and offers an effective salvage option for the treatment of recurrent high-grade gliomas with encouraging OS. Our results suggest that the dose gradient had an impact on survival.

EP-1200 Fractionated stereotactic radiotherapy in meningiomas

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Purpose or Objective

Retrospective review of patients with meningiomas who have been treated by fractionated stereotactic radiotherapy (FSRT) at our department.

Material and Methods

From April 2005 to December 2014, 109 patients were treated for intracranial meningioma, excluding cases localized in the optic nerve or cavernous sinus. The median age was 57 years, the majority of patients was women (74%). 50.3% of the patients underwent treatment with FSRT without previous treatment, the remainder were treated after surgery, the majority (44%) with partial resection. The reason for the treatment with this technique was the proximity to the optic pathway in 71% of the patients. The mean dose was 50Gy/2Gy fraction in 25 fractions, one fraction per day, 5 fractions per week. In most cases, the treatment was performed using a lineal accelerator with one isocenter and 8 fields (26%).

Results

With a median follow-up of 36 months, 72.9% of the patients presented stabilization and 21.8% decreased tumor size. Only 3.8% of the patients had disease progression and 1.5% couldn´t be evaluated. Regarding the clinical situation, 48.9% of the patients remained stable, 15% hadn´t associated symptoms and 17.3% reported clinical improvement. Only 13.5% of the patients had clinical worsening. There wasn´t acute toxicity in 55.2% of patients, with headache being the most frequent (26%), mainly grade 1 (88.6%). No late toxicity was recorded in 78.8%.

Conclusion

FSRT is a well tolerated treatment modality with good local control. It´s a treatment option for large meningiomas and located close to critical organs at risk.