

Results: A total of 26 lesions were included in the analysis. Median follow-up was 14 months (3-41 months). Thirteen were metastatic lesions with histology as breast cancer, medulloblastoma, adenoid cystic among others. Response rates were: 31% complete response and partial response / stable at 69%. 13 benign lesions highlighting arteriovenous malformations, neurofibroma and melanocytoma. Response rates for this group: complete response in 8%, partial response / stable at 92%. During the follow-up time only 5 patients had relapsed 100% to distance. Median overall average dose was 21 Gy (14-35 Gy), the median was three fractions (1-5 Fractions), median prescription isodose was 83% (77-88%) with an average coverage of 97.27% (93.13-100%). There were no data as myelopathy grade II associated to treatment in the whole cohort, the most common symptom after treatment was fatigue.

Conclusion: The treatment of intraspinal tumors with image-guided robotic SBRT, has proven to be a feasible, safe and effective option for treatment, where treatment options are scarce. In our experience, the data are encouraging and comparable with those reported by other authors.

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Treatment outcome of adult brain stem Glioma: a single institution experience

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Purpose or Objective: Adult brain stem gliomas are rare accounting for 1-2% of adult gliomas. They are heterogeneous with varying clinical and radiological presentation. Prognosis remains poor because of limited surgical options and radiotherapy still remains the main treatment option. We report our clinical experience of treating brain stem glioma.

Material and Methods: A Retrospective review was made to analyze the clinical presentation, diagnosis, treatment outcome and survival in adult brain stem glioma patients treated at Shaukat Khanum Memorial Cancer Hospital Lahore. Between July 2007 and August 2014.

Results: 46 patients were identified from Hospital record system. Diagnosis was mostly based on radiological findings with MRI brain and biopsy was done only in 11 patients. 98% of the patients were treated with radiotherapy as a first line treatment on presentation and 1 patient was kept under close surveillance which was treated on progression. Median radiotherapy dose used ranged between (20-60Gy) with a median dose of 51Gy. Age of the patients ranged from 18 to 72 years (median 33 years) with a Male to female ratio of 3:1. Median follow up duration was 9 months (range 1-72). Radiological response was seen in 65% (13% partial & 52% stable) of the patients. The median overall survival (OS) for entire cohort was 10 months. One and two year OS rates were 46% and 25% respectively. Radiological Low grade Glioma showed a median survival of 11.5 months and was found to be 9.5 months for High grade Glioma. (p=0.864). ECOG Performance status 0,1,2 and 3 showed median survival of 13.6, 11.5, 6 and 3 months respectively (p=.02)

Conclusion: Survival still remains dismal despite high radiotherapy dose. The role of cytogenetics and chemotherapy should be explored to improve outcome.

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Efficacy and safety of stereotactic reirradiation for recurrent brain metastases.

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Purpose or Objective:

Background: Brain metastases (BM) are the most common CNS malignancies. They represent an important cause of morbidity and mortality in cancer patients. In the literature, few studies have evaluated the efficacy of stereotactic reirradiation (SRT) for recurrent brain metastases as a salvage treatment option after a prior radiotherapy.

Objectives: This study reports the clinical outcome and tolerance of repeat irradiation with CyberKnife robotic stereotactic delivery in patients with recurrent brain metastases and a history of prior cerebral radiotherapy. Overall survival (OS), intracranial progression-free survival (PFS), local control (LC) and prognostic factors associated with overall survival (OS) were evaluated.

Material and Methods: Patients treated from April 2010 to January 2015 for recurrent brain metastases were retrospectively included. Univariate and multivariable analyses included age, performance status, recursive partitioning analysis (RPA), extracranial disease control, and time from initial RT to SRT. The prior radiotherapy was WBRT for 27 patients (dose from 30 Gy to 45 Gy), radiosurgery with Gamma knife for 8 patient (dose from 18 Gy to 25 Gy) and hypo fractionated stereotactic radiotherapy in 2 patients. The tumor size ranged from 1 to 4 cm (median 2 cm).

Results: In total, 37 Patients with 53 recurrent brain metastases and a median age of 58 years (Range 33-82 years) were included. The median number of metastases per patient was 2 (range 1-4), treated with a median dose of 21 Gy (range 10-36) per treatment, with a median of 3 fractions (range 1-9) per patient. The median follow-up was 10,1 months (range 1-19 months). The OS rate from the SRT was 57,2% (IC 95%: 34.6-74.6). Two (5%) of 12 deaths were from neurologic causes. The median PFS was 5.8 months (IC 95%: 3.6-9.3). On multivariate analysis, controlled extracranial disease is correlated with better overall survival 31% (IC 95%: 15-50; p=0,005). Adverse radiation events developed was acceptable.

