

A Survival analysis of high-grade gliomas in sub-himalayan population including the times of lockdown during covid 19 pandemic :A single institutional experience

Pooja Kalra¹, Meenu Gupta¹, Vipul Nautiyal¹, Ranjeet Kumar², Sanjeev Pandey², Nazia Shirazi³, Brijesh Tiwari², Mushtaq Ahmad¹

Department of Radiation Oncology¹, Neurooncology², Oncopathology³

Himalayan Institute of Medical Sciences ,Swami Rama Himalayan University, Dehradun, India .

Background and Objectives

High Grade Gliomas are categorised as Grade III and IV and have high mortality rate with poor prognosis. How we should adopt clinical practice in neuro-oncology during Covid 19 Pandemic is another area of scientific exploration . Hypofractionated radiotherapy protocols can be easily utilised in high grade gliomas during Covid 19 pandemic .

Materials and Methods

Retrospective analysis of 147 patients with diagnosis of high-grade gliomas between January 2009 till December 2020 including Covid-19 pandemic lockdown time was done. Age , gender , KPS , symptoms , extent of surgery and use of concurrent temozolamide , were evaluated using univariate and multivariate analysis .Overall Survival was determined using the Kaplan Meir method .

Results

Glioblastoma multiforme being the most common brain tumor (82.3%) in all high-grade gliomas .Near total or total excision was done in 83.7% of cases The median dose of EBRT delivered was 60Gy .75.5% patients were treated with concurrent and adjuvant chemotherapy . 29.2% patients were treated during Covid 19 pandemic lockdown time . The median overall survival was 15.9 months . The 1 year Overall survival was 67.8% , and 3 year OS was 6.4% . Out of 43 patients treated during covid pandemic time ,62.7% are alive and on follow up .

Conclusion

The results of survival analysis demonstrated the benefit of adding radiation with concurrent and adjuvant temzolamide in high grade gliomas including covid 19 during lockdown time . Hypofractionated radiotherapy with concurrent temozolamide is safe during the Covid 19 pandemic.