



Mini Review

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Radiotherapy and Chemotherapy in Low-Grade Glioma (LGG)



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Although optimal timing is unclear, but radiotherapy is an important component of therapy for LGG. Early and delayed radiotherapy can be used for LGG depending on some factors like tumor associated symptoms and presence of risk factors determining the outcome. Poor prognostic factors can be incomplete resection, MIB-1 index elevation, astrocytic histology, more than 40 year of age, absence of 1p/19q-codeletion, large sizes and mutation in isocitrate dehydrogenase. In some studies, with using 50-54 Gy RT dose with 1.8 Gy per fraction, the overall survival rates were similar between the patients whom received radiotherapy in early phase or during progression phase of the disease [1-5].

The difference was about seizures controlling which was better in early phase radiotherapy. Fractionated stereotactic radiotherapy, proton radiotherapy and hyperfractionated radiotherapy may be used to increase the treatment effects however there should be more studies and trials to be done to show their effectiveness in comparison with conventional radiotherapy. In chemotherapy for patients with LGG, patients with Isocitrate DeHydrogenase (IDH)-1 mutations, oligoastrocytoma and oligodendroglioma benefit more from treatment [6-9]. This is really not clear whether PCV can be equally effective as Temozolomide and there should be more studies and trials to be done in this field.

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