Phase II Study of Weekly Vinblastine in Recurrent or Refractory Pediatric Low-Grade Glioma.


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Abstract

PURPOSE To evaluate the efficacy of single-agent vinblastine in pediatric patients with recurrent or refractory low-grade glioma. PATIENTS AND METHODSPatients were eligible if they had experienced previous treatment failure (chemotherapy and/or radiation) for incompletely resected or unresectable low-grade glioma (LGG). Vinblastine (6 mg/m2) was administered weekly for 1 year unless unacceptable toxicity or progression (confirmed on two consecutive imaging studies) occurred. Results Fifty-one patients (age range, 1.4 to 18.2 years; median age, 7.2 years) were prospectively enrolled onto this phase II study. Fifty patients had previously received at least one prior regimen of chemotherapy, and 10 patients had previously received radiation treatment. Fifty patients were evaluable for response; 18 patients (36%) had a complete, partial, or minor response, and 31 patients completed 1 year of treatment. At a median follow-up of 67 months, 23 patients had not experienced progression; three patients have died. Five-year overall survival was 93.2% ± 3.8%, and 5-year progression-free survival was 42.3% ± 7.2%. Toxicity was manageable and mostly hematologic, although a few patients needed transfusions. CONCLUSION Weekly vinblastine seems to be a reasonable alternative to radiation for pediatric patients with LGG who have experienced treatment failure with first-line chemotherapy. The 5-year progression-free survival observed in this phase II trial is comparable to results observed with first-line chemotherapy in chemotherapy-naive patients. The role of single-agent vinblastine and other vinca alkaloid in the management of pediatric LGGs deserves further investigation.

PMID: 22393086 [PubMed - as supplied by publisher]