Metronomic chemotherapy and radiotherapy as salvage treatment in refractory or relapsed pediatric solid tumours.

AM Ali, MI El-Sayed

Abstract:

Background Metronomic chemotherapy (mctx) combined with radiation therapy (rt) is an emerging anticancer strategy. The aim of the present study was to assess the efficacy of mctx combined with rt as salvage treatment in children with refractory or relapsed solid malignancies. Methods This prospective study enrolled patients with refractory or relapsed pediatric solid tumours from January 2013 to January 2015. Treatment consisted of 3–12 courses of mctx in all patients, followed by rt in patients who experienced local recurrence, distant metastases, or both. Each course of mctx consisted of oral celecoxib 100–400 mg twice daily (days 1–42), intravenous vinblastine 3 mg/m2 weekly (weeks 1–6), oral cyclophosphamide 2.5 mg/m2 daily (days 1–21), and oral methotrexate 15 mg/m2 twice weekly (days 21–42). Statistical methods used were the log-rank test and binary logistic regression. Results A favourable disease response (partial response or stable disease) was seen in 49 of 64 patients (76.6%), with mild acute toxicity occurring in 41 (64%). After a median follow-up of 14 months, 1-year overall survival was 62%. Pattern of disease relapse (p

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