Efficacy of metronomic oral cyclophosphamide with low dose dexamethasone and celecoxib in metastatic castration-resistant prostate cancer.

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Abstract

AIM: This study aimed to assess the efficacy and safety of oral metronomic chemotherapy in patients with metastatic castration-resistant prostate cancer (mCRPC).

METHODS: From January 2011 to February 2013, 60 patients with mCRPC received daily metronomic oral cyclophosphamide (50 mg qd), dexamethasone (1 mg qd) and celecoxib (200 mg bid). Among them 49 patients who met the preset inclusion criteria were included in this retrospective study. Adverse events and activity for reducing serum prostate-specific antigen (PSA) levels, Response Evaluation Criteria in Solid Tumor responses and symptomatic responses were reviewed. The primary endpoints were PSA response rate and time to PSA progression (TTPSA).

RESULTS: Twenty-two patients had previous exposure to docetaxel. The median age was 71 years (range, 49-88) with a median Eastern Cooperative Oncology Group performance of 1 (range, 0-2). The Gleason score was 8 or more in 41 patients (84%) with a median baseline serum PSA of 32.1 ng/mL (range, 1.2-743.0). The PSA response rate was 39%. With a median follow-duration of 17.5 months, the median TTPSA was 5.2 months (95% CI: 3.1-7.4). The median time to composite progression was 3.9 months (95% CI: 2.2-5.6) and a median overall survival was 13.3 months (95% CI: 9.5-17.1 months). There were no significant differences in the TTPSA between the pre- and post-docetaxel groups. Grade 3-4 AEs occurred only in six patients.

CONCLUSION: Metronomic oral cyclophosphamide chemotherapy is safe, well-tolerated and shows promising activity against mCRPC.

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KEYWORDS: castration-resistant prostate cancer; celecoxib; cyclophosphamide; dexamethasone; metronomic

PMID: 27521286 DOI: 10.1111/ajco.12583

[PubMed - as supplied by publisher]