

Leptomeningeal metastasis from prostate cancer

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ABSTRACT

Aims and background. Metastatic prostate carcinoma commonly involves bones and extrapelvic lymph nodes, with occasional visceral deposits. Central nervous system involvement is unusual and particularly the occurrence of leptomeningeal metastasis (LM) is extremely rare, with few cases described in the medical literature. The clinical presentation is characterized by multifocal neurological deficit and the prognosis is generally dismal, with survival ranging between 3 and 6 months. We report on a patient affected by LM due to prostate cancer who was treated with a combined-modality approach consisting of sequential chemotherapy and radiotherapy.

Methods. A 70-year-old man was referred to our group for cognitive mental disorder, left-sided frontal headache and nausea; the patient had a previous history of metastatic prostate cancer. LM was diagnosed neuroradiologically with brain MRI and evidence of a detectable level of PSA in the cerebrospinal fluid. He was treated with docetaxel and prednisone for 3 cycles followed by external beam radiotherapy (EBRT) to the whole brain to a total dose of 30 Gy in 10 fractions with a simultaneous integrated boost to the macroscopic disease (total dose of 35 Gy in 10 fractions). No acute toxicity was observed.

Results. A substantial clinical response was obtained after EBRT with neurological improvement and radiologically stable disease at post-treatment imaging until 10 weeks after radiation. The patient died of sudden general condition deterioration 3 months after EBRT.

Conclusion. Since LM derived from prostate cancer is likely to become a more common clinical event, such patients would need to be included in clinical trials evaluating new therapeutic approaches, considering that the current treatment strategies have been shown to be rather ineffective.

Key words: leptomeningeal metastasis, metastatic prostate cancer, radiotherapy, central nervous system.

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